

August 1993

The National Locksmith[®]



NEW
&
PROFITABLE
IDEAS!

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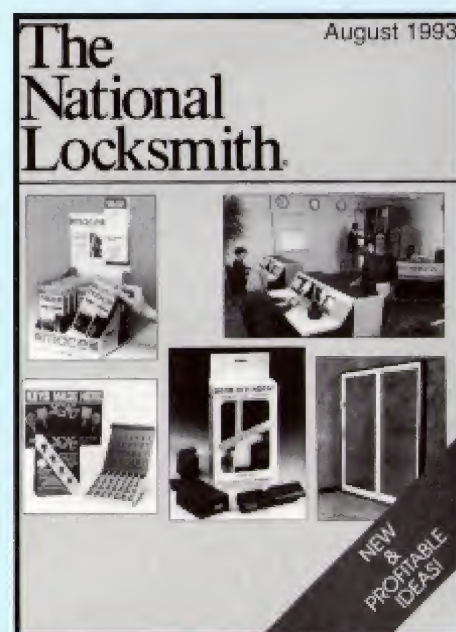
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On The Cover

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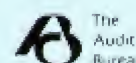
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Commentary

Why Is The ADA Moving So Slowly?!

For some time now the security industry has been buzzing about the Americans With Disabilities Act (ADA). We have been waiting for this extraordinary new set of laws to bring a great deal of business to the locksmith. As you know, this new business has been coming, but very slowly.

To review, the ADA mandates that most commercial buildings and facilities in the U.S. must be completely accessible to the disabled. This means wheel chair ramps and bathroom stalls must be handicapped accessible. But more importantly, for the locksmith, it also means that lever sets must be installed to replace knob locks and door pulls. It also regulates the use of door closers, etc.

Why, then, is compliance with the ADA moving so slowly? And does this mean that you really won't be seeing the impact of ADA eventually?

A recent article in the real estate section of the *Chicago Tribune* offers some answers to these questions. The article states that it has now been 18 months since the ADA went into effect and building owners started to face compliance with the 282 standards of the law. Although there have been very few lawsuits to date over non-compliance with ADA, this doesn't mean that building owners can ignore the law.

The Tribune article states that the "legal calm may have lulled some building owners into a sense of false security." In fact, enforcement procedures are now being increased. The U.S. Department of Justice is responsible for enforcing the provisions of the ADA. According to one building owner's association spokesman, in the first year the Justice Department has spent a lot of time doing "hand holding." But now, the Justice Department is increasing its efforts to enforce the ADA.

Since passing the law, the ADA office at the Department of Justice has increased from one attorney to 10 staffers. Five more are expected to be hired shortly. Also expected is that the government will pick a landmark case in which to start a lawsuit to force building owners to comply with ADA. This will stir up a lot of publicity and encourage people to comply with the law.

Of course, the government is not the only group involved in policing the ADA. Disability rights groups are gearing

up to educate themselves about the standards. Experts believe that these rights groups will become more aggressive in the future effort to force building owners to comply. It seems that after the first few court cases have been heard, efforts to enforce the ADA are likely to increase rapidly.

Remember, the ADA law does have teeth. Up to \$100,000.00 in fines can be assessed under Title III of the act. This is the provision that deals with accessibility of commercial properties. Title I, dealing with employment provisions, are even stiffer.

What does all this mean to you? I believe it means that the feds are going to gear up to start suing building owners for non-compliance. When that happens...look out! You will be spending a lot of time on commercial properties. What do you do for now? Become as familiar as possible with the ADA. See Jake Jakubowski's article, *ADA...A Sleeper*, on page 44 of this issue. In the future, the ADA will bring business to you!

Speaking of Jake, in his article called *Aspirin And Old Locks*, last month, we made a couple of boo-boos. On page 91, we said the installation of the six locks took 52 hours. It should have read 5-1/2 hours. We also said he charged 22 times his cost for the locks. It should have read 2-1/2 times. Oops!

This month we welcome our new Art Director, Jim Darow to *The National Locksmith*. Between Jim and Production Director Sandy Kucharski, the magazine will have a whole new look starting next month. Stay tuned!



Marc Goldberg
Editor/Publisher

August 1993 5

Seroogy Speaks...

Notes From the Managing Editor

The battle over licensing continues. Illinois locksmiths have been embroiled in fighting Illinois Senate Bill SB252. This law, as written, does not allow anyone except a licensed alarm installer to install any type of alarm device, including alarmed exit/panic devices. Sponsors of the bill have assured local associations that this part of the law would not be enforced upon the locksmith.

Right, and taxes are only temporary, I'm the Pope, and pigs fly.

While locksmiths in Illinois and other states, battle to protect the trade to which they have dedicated their lives, the question as to where I stand on licensing constantly pops up.

There are actually two sides to the answer.

Ideally, any trade, profession, product or service should be allowed to operate within a society, untouched by government restrictions and taxation.

Ideally, the number and size of any given trade, profession, product or service are determined by the needs of the people in the area they serve.

Ideally, everyone would take only what they needed.

Ideally, everyone would offer their excess to those less fortunate.

Ideally, all those involved in security (whether locksmith,



alarm installer, guard, policeman, etc.) are honest.

Ideally, all those involved in security are competent.

Ideally, all those involved in any trade, profession, product or service consider the satisfaction of the customer as their end goal.

Ideally, monetary considerations are not the focus of success, or the end-all of a business transaction.

Ideally, the customer decides to have a job done right the first time, regardless of monetary considerations.

Ideally, all customers could afford to have it done right the first time.

Ideally, the rights, privileges and welfare of the other person are of higher value than our own.

Ideally, I don't believe in licensing.

Realistically, however, we aren't living in a perfect world. The laws of imperfection require that laws be established, regardless of how imperfect the laws may be.

Realistically, we can't expect those who determine the law, interpret the law and enforce the law to fully understand, accept or even care about the effects of

those laws.

Realistically, many laws are introduced by politicians, at the urging of a lobbyist who is paid by a special interest group.

Realistically, the laws that have the best chance of being passed are introduced by politicians, at the urging of a lobbyist who is paid by a special interest group that has a lot of money.

Realistically, these politicians do not have the time to research the significance and effects of these laws and simply take the lobbyist's word when they say it is done in the "best interest of the public."

Realistically, politicians act more like a school of lemmings; passing laws with little contemplation, often hanging onto the coattails of their more powerful and prominent colleagues.

Realistically, these laws have unfair negative affects on smaller groups and individuals who are not capable of raising the funds to hire a lobbyist or full time legal representative.

Realistically, the success of a law being passed is more dependent on the affluence, savvy and clout of the group who initiated the law than on the politicians' knowledge of the law and its affects on all involved.

Realistically, if locksmiths don't want to be licensed out of business by alarm installers and other groups, we need to pursue licensing.

This is all very frustrating. But until there are no more taxes, I'm the Pope and pigs do fly, what other choices are there? §

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Reader Disapproves Of Plug Modifications

Dear Marc:

In your June issue, in the Technitips section, I read a tip that compelled me to write to you, to express my concerns.

The item that is an embarrassment to the locksmith industry is the so called "Plug Modification." Not only was Leo Koulogianes condoned for his obvious lack of Professionalism, But he was also rewarded and labeled a winner... I think not!

In the year of 1993, professional locksmiths have all kinds of equipment and supplies available to us, which enables us to start and to finish a job in a professional manner.

Code machines are used for depth and spacing problems, while pin kits in various increments address the inherent problems associated with working on oddball locksets.

For those in our industry, to accept this type of behavior, is to admit that we are just what some people label us, "hack men." In the San Francisco Bay area, Plug Modifications, such as this

damage good quality locksets, destroys master keys systems, and creates unjust expense in plug replacement.

To condone and reward the "hack man" behavior, sends a clear message to the "hack man" union, that this is acceptable and once again I say to you... I think not!!!

There is no harm in saying no, it can't be done due to a difference in lock manufacturers and once again I will say that for the love of money a man will sell his soul for a buck!

it truly saddens me every time I come across these so called modifications because, I believe that this is the state of our industry.

Rudolfo "Rudy" Garta
California

Editor's Note:

I can't begin to express how good it feels to see a locksmith that demands that a job be done correctly. I have to agree with you that our reputation as locksmiths has been tarnished as a result of a very few of us who unnecessarily or indiscriminately modify hardware to meet a customer's desire. This is especially aggravating when that hardware is part of a masterkey system and where correct parts are available.

However, I do believe there are times and places where it is beneficial and "professional" to make modifications. For example, a lock cylinder is designed to provide for a certain degree of security against picking and interchange with

other keys. When a customer requests a masterkey system, that lock must be modified in order to meet that request.

To do so, extra pins are added to the chambers to allow more than one key to operate that lock. In the process, however, the security of the cylinder has been reduced in favor of convenience. The trade-off between security and convenience is not only acceptable in this case, but the ability to achieve the proper balance of each has been the measure of a locksmith's competency for many years.

In the case of Mr. Koulogianes, the modification was limited to cylinders used on a security storm door in a residential application. The modification brought an existing piece of hardware into specification with already existing hardware. It did not affect the integrity of the cylinder or the hardware. It was less expensive to both the locksmith and the customer. It did not affect a previously designed system of keying or security. In fact, because it was made to fit into an existing system, the next locksmith is saved the time and effort of making a key fit the cylinder properly, and it made the customer happy.

And, finally, because it can easily and successfully be attempted at any time and by any locksmith, this modification is probably one of the better modification tips we have had in some time.

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and supplies.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107

by Robert Sieveking

August's Best Tip

This Technitip concerns my method of removing the ignition cylinder from a Geo Metro or similar type of ignition.

Removal of the ignition cylinder is often necessary because of a broken key or the need to recombine the cylinder. These cylinders are held in place by three small roll pins, as you see in illustration one. The easiest method I have found, to remove these retaining pins, is to drill a hole beside the pin, as you see in illustration two, and pry the pin up and out. Always drill "beside the pin," not between the pin and the face of the cylinder. This will allow you to reinstall the roll pin into the housing, in the original hole. Pins number 2 and 3, as you see in

illustration one, are relatively easy to remove, by the "drill beside the pin," method. Cylinder retaining pin number 1, however, is in a position pointing toward the dash of the car. In order to remove the pin in the above manner, it would be necessary to remove the entire ignition assembly. In some cases, this is neither desirable nor practical. Instead of removing the ignition housing from the steering

column, to remove the retaining pin, I have found that by drilling a hole from the face of the lock cylinder, as you see in illustration one, immediately under the retaining pin, I can pry the retaining pin up enough to remove it with a pair of flush cutting diagonal cutters. Because of the design of the plastic shroud and cylinder face, the hole will be covered after the column is

Continued on page 12

These Prizes Awarded Each Month!

All-Lock A-7000 VATS Decoder
HPC Pistolpick
Silca Rubberhead Keyblanks (100 blanks)
ESP PR-13 Professional Lock Pick Set
Sieveking Products EZ-Pull GM Wheel Puller
Fort Lock Merchandise Rack
Submit your tip and win!

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not be eligible!** So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

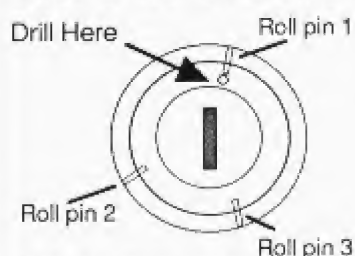
Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.

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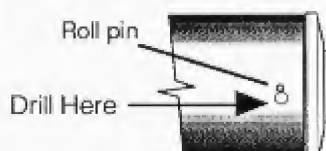
Roll-Pin removal



When the ignition
is near the dash.

Illustration 1

Drill "Beside the Pin"



This allows the pin to be
reinstalled in the original
hole.

Illustration 2

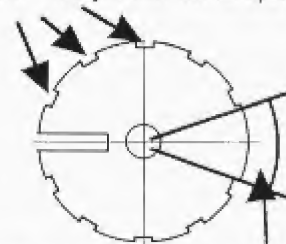
reassembled. Be careful to place the hole properly, when face drilling for the retaining pin.

This method is effective on a number of other similar ignition locks. The hole, however may not always be hidden after the work is complete. Use a button head drive screw, like those used to attach serial number plates to safe doors, as a plug for the hole. You may need to experiment to find a drive screw the correct size. Good luck.

Hector C. Giosa
Washington

False Gate, or True Gate?

10 false gates,
approximately 5 numbers apart



Sentry 13 number
6380 containers spread
Illustration 3

All-Lock VATS Decoder Winner

This Technitip is more in the form of a discovery I have made, while servicing a Sentry #6380 series safe/fireproof container. If the need arises, to manipulate this lock, it may help to know the location of the drive cam gate. The drive cam has 10 false gates, arranged as you see in illustration three. Five false gates are found on either side of the true gate. They are approximately 5 numbers apart. A spread of thirteen numbers

width is found immediately opposite the true gate. By finding the center of the 13 number spread, and translating this to the opposite side of the dial, the true gate can be found. By knowing the location of the drive cam gate, the remaining two wheel gates are much easier to locate, using trial combinations.

Raymond C. Denkwicz
Massachusetts

Continued on page 14



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HPC Pistolpick Winner

This Technitip is for an accessory that I came up with to keep those pesky little tumbler springs from getting all tangled up, after you have untangled them.

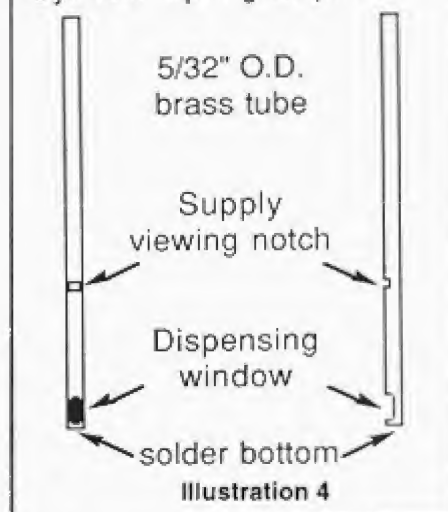
Most hobby shops sell round brass tubing in various diameters. I have found that 5/32" O.D. tube is exactly the right size for the spring dispenser. By soldering the bottom of the tube closed, and opening a 3/16" window in the side of the tube, as you see in illustration four, the dispenser is complete. A notch, cut into the side of

the tube, about 2" above the removal window, serves as an indicator of the need to refill the tube. The whole tube is 12" long.

Mount this little dispenser in a convenient spot, above your pin kit. When you need a spring, simply grab one out of the bottom window with your pin tweezers. Another spring will drop down to replace the one removed. There is no chance of tangled springs, and they are always handy.

This dispenser has been a big help to me. I hope the Technitip helps a

The "No-Tangle" Cylinder Spring dispenser



fellow locksmith.

John Lee Jr.
Pennsylvania

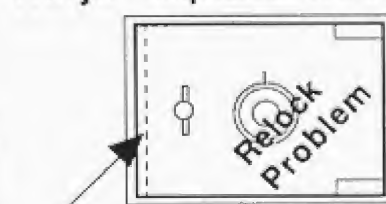
Silca Keyblanks Winner

My Technitip concerns a method of opening a Major square door safe, when the back of the lock has become loose, allowing the relocking trigger to block the bolt from being retracted.

The problem is best described like this: The combination was worked, and I could feel the nose of the lever drop into the drive cam gate. Rotation of the dial to retract the lock bolt was prevented by the internal case relocker. Because of loose cover screws, the internal relocker was preventing the lock bolt from being retracted. Applying turning tension to the dial to retract the bolt, while jarring the door with a "dead-blow" hammer, failed to dislodge the relock trigger.

Before reaching for the drill, I

Major square door



Lip acts as a stop only

Relock Tool

material:

1/8" spring wire

Illustration 5



Don't panic!
We have Security
Exit Devices.

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decided to try one more trick. Using a piece of 1/8" spring wire, the same material used to make some car opening tools, I fashioned the tool shown in illustration five. The major square door safe only has a lip along the outside edge of the door, as you see in the illustration. This leaves the margin at the top and bottom of the door open. Using the door and position of the dial to determine the location of the lock, the tool was made. It was designed to enter at the top margin of the door, be rotated to bring the hook behind the loose lock cover, and used to pull the lock cover against the lock. When the cover was pulled against the lock, the relock trigger disengaged, and the bolt was retracted. The safe was opened without damage, and the lock repaired. If you have difficulty inserting the rod tool into the margin of the door, it is possible to wedge the side of the safe with a large screwdriver, to open the door margin slightly.

J. W. Stokes
California

ESP Pickset Winner

If you progress keys to GM vehicles, by using the glove box to

GM PROGRESSION, ON A MAGNETIC CARD

11	22	13	24	35
21	22	22	34	45
31	32	33	44	55
G. M. Progression				
RULES: 1. sum of cuts must be an even number. 2. no more than two depths between adjacent cuts. 3. sum of known cuts= odd number, use odd progression. sum of known cuts= even number, use even progression.				

clip and paste
Illustration 6

find four of the six cuts, and progressing the remaining cuts in a door or trunk cylinder, this Technitip may be of interest to you. Clip out illustration six and glue it to a magnetic business card. After finding the cuts from the glove box lock, use the chart to progress the unknown cuts. Stick the chart next to the lock, on the car you are working on, and you'll never have to worry about the wind blowing it down the street. Laminating film, over the paper, will prevent moisture and finger prints from spoiling the card. When not in use, stick the card inside the lid of your metal Curtis clipper box.

Bob DeWeese
Maryland

E-Z Pull GM Wheel Puller Winner

Like many locksmiths, I take great pleasure in making my own job specific tools. As I have become more involved in safe openings, I have found a need for a dial puller that could be used to "press" a dial off its spindle shaft. Photograph seven is my solution to this need.

The parts necessary are available

Continued on page 72



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Newsmakers

New Products and Industry News

The Defender Grade 1 Deadbolt From Marks USA

The new Defender 130 Series deadbolts from Marks USA are designed for Grade 1 security. They are made in 2-3/8" and 2-3/4" backsets for conventional key-in-knob and Best™ size removable core cylinders.

Conventional models use standard key-in-knob cylinders; the same as those used on Marks cylindrical locksets.

In addition to this unique feature, the 130 Series includes a hardened roll pin in its one inch throw deadbolt, adjustable bevel latch faceplate, rotating exterior security collar, and steel shutters to conceal mounting bolts on double cylinder models.

Because of its design, the installation of these locks is greatly simplified. Exterior and interior trim are complete assemblies with no loose components. Tailpiece orientation and latch positioning, required on other deadbolts, is eliminated.

Classic Steel Padlocks By Federal Lock

Federal Lock Company introduces the classic steel 400 & 900 series padlock group. These solid steel padlocks are built to provide maximum protection against physical abuse.

Standard features include: hardened solid steel lock bodies, quality chrome plating, hardened steel and alloy shackles, rekeyable 6 pin brass cylinders, with first position top and bottom pins of stainless steel to resist drilling of cylinder.

Additional features of Series 900 include: double ball locking mechanism, heavy duty cylinder cover plate and vertical shackle clearances of 1", 2", and 3".

McDowell-Craig's File Cabinet Locking Bar

There are no clutter problems with the self-contained McDowell-Craig Swing-A-Way Locking Bar. The bar remains permanently affixed to the file, whether or not the file is in use. Heavy duty cold rolled steel gives the Swing-A-Way Locking Bar strength where it is needed. The bars are zinc plated to prohibit corrosion and to permit their use with any color combination. Red signal tape is attached to the backside of each bar to prevent scratches on painted surfaces and to indicate when the bar is an open position.



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Software, Books, Car
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Tools, Door Guards,
and Key Cabinets

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New Drill Sharpener By Darex

For a limited time, Darex Corporation is offering a drill sharpener special exclusively to readers of *The National Locksmith*. The new M-4 Deluxe is an upgrade of the popular Darex M-4 drill sharpener. The improved M-4 Deluxe includes a tough 220 grit diamond wheel, a protective cover and a drill sharpening demonstration video.

A diamond impregnated sharpening wheel replaces the standard sharpening wheel on the M-4 deluxe. This improvement gives the operator an immediate gain in finish and accuracy.

Locksmiths will find a lot to like



about the M4 Deluxe. The super abrasive diamond wheel and Darex chuck system make it possible to sharpen an impressive range of drill styles easily. Sharpen high speed steel, cobalt and carbide drills. Produce aggressive point angles. Even sharpen those costly specialty drills such as bellhanger and masonry drills.

Darex products are available on a thirty day free trial.

For FREE Information Circle 309 on Rapid Reply Security Door Control's Exit Check

A technologically advanced delayed egress locking system that is not only user friendly, but designed to assist the blind and deaf, has been introduced by Security Door Controls.

Designated the SDC 101 Exit Check and designed to meet NFPA Life Safety Code 101, Special Locking Arrangements, the self-contained system provides multi language, 85db verbal exiting instructions from an unexposed audio speaker. Additionally, a lighted digital countdown display allows a person to view the 15 to 30 seconds it takes for egress. Security personnel are notified of unauthorized exit.

For FREE Information
Circle 310 on Rapid Reply

Vindicator Corp. Offers New Safe Lock

Vindicator Corporation, a leading manufacturer of intrusion detection and access control systems, announced the release of the Vindicator Lock-and-electronic, microprocessor-based lock that controls access to the contents of a security safe.

The Vindicator Lock will help security directors, loss prevention professionals, and audit investigators in resolving crimes due to employee theft because the Vindicator Lock keeps a detailed audit trail of all safe openings and closings, including who opened the safe. Furthermore, the Vindicator Lock provides increased robbery protection with a built-in-time-lock as well as time-delayed openings.



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MANAGEMENT

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Providing quality
tools, parts, and
service for
the security
professional.

Aiphone Door Answering System

Aiphone announces the introduction of the C-123LW Chime Com Dual Master Door Answering System. the addition of the two master C-123LW set answers a long requested need for an economical open voice type system that can answer and monitor a door from two inside stations.



The new model provides door answering, door release control, audio monitoring and hands free operation at the door station. The system operates on either 6V DC or batteries, and requires only two wires- the same wiring needed for a doorbell. An additional pair of wires is needed for door release, plus an 12V AC transformer.

For FREE Information
Circle 312 on Rapid Reply

Von Duprin's Vertical Rod And Latch Guard

A Vertical Rod and Latch Guard now available from Von Duprin protects the bottom rod of an exit device installed on wood doors from damage caused when carts or gurneys pass through the doors. Protecting these rods is essential to preserve their intended function and avoid jeopardizing safe egress during



an emergency.

The guard provides a smooth, unobstructed surface that is attractive and also allows wood doors to be pushed open easily with the bumpers of a wheelchair. The latch guard is designed to meet accessibility requirements.

For FREE Information
Circle 314 on Rapid Reply

Defender Door Bar By Phoenix

The new Defender Series 12 and 14 represent the entry of Phoenix Industries into the economy end of the door security bar market. Priced to sell in the same range as units composed of light-weight sheet metal, the Defender Series 12 and 14 are over one hundred percent more rugged than some competitive units. Additionally, the D-12 and D-14 are fully adjustable to accommodate varying opening widths and jamb depths. Phoenix quality, design excellence, fast delivery and great customer service are all now available at the lower-priced end of the market.

For FREE Information
Circle 313 on Rapid Reply

Major

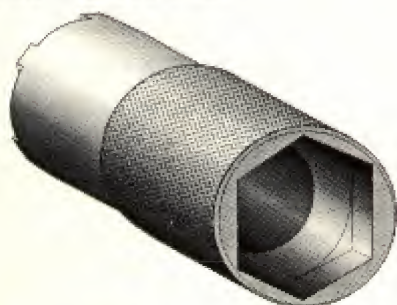
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**Every Installation
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Of the Person Who Did It.
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Major Manufacturing Presents The HIT-20

Designed as a companion tool to the HIT-11 drill guide, the HIT-20 is a multi-purpose nut driver used on Corbin/Russwin 800 Series, Medeco Embassy and Yale 5400 Series grade 1 cylindrical levers. The HIT-20 provides a better grip and control when tightening the locking nut on the inside sleeve, than the throw away tool provided by the manufacturer, greatly decreasing installation time. Machined from 6061 aluminum and finished in red anodize. The HIT-20 offers years of professional service. Major Mfg. products are available from your distributor.



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Phoenix Knobset From Weiser Lock

The new versatile Phoenix knobset by Weiser Lock has a high end image that can complement a range of styles from colonial to contemporary... and is available at a reasonable price. This newest entry from Weiser combines style and function to provide the finishing touch for every door in the house, and is offered with either a turn-button or push-and-turn knob locking function.



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Handicap Lockset By Yale

Yale's 5300L Standard Duty Cylindrical Lockset provides easy accessibility for handicapped persons. The attractive Augusta lever design is easy to grip and depress for entry. It is designed to meet handicap requirements for standard duty bored locks, ANSI A156.2, Grade 2.

Available in bright brass and satin chrome finishes, the 5300L is economically priced, yet offers quality construction and positive security for residential and light commercial applications. It may also be used as a companion unit with Yale's heavy duty Augusta 5400L Series.



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Test Article #22

General Security

To be tested in September 1993
issue. Details in insert in front of issue.

The APR Rim Device

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

A relative newcomer to the exit hardware market is the ED22 rim device by APR industries. (See photograph 1.) The unit is low profile (2-3/8" projection), made of a heavy gauge metal, and incorporates good new install and retrofit design qualities. This article covers an installation of the ED22 with an exit only function. Exit only requires that there is no outside trim or lock cylinder, and the door (or device) is used for exiting only.

Because of its relative ease, this type of exit device installation is a reliable money maker even for a locksmith new to this end of the industry.

In fact, with any exit only rim device, there are really only four major steps or phases to the installation: Marking for the proper strike and head mounting positions, marking for and attaching the rear mounting bracket, mounting the device to the door, and, finally, installing and adjusting the strike.

The ED22 is designed to fit most standard door installations including doors with ANSI 161 prep (1-3/4" thick door, 2-1/8" cross-bore, 2-3/4" backset). The standard length is made for a 36" door, and an extra long unit can be ordered for doors 3' 7" and wider. On shorter widths the unit can be cut in field using a hacksaw.

All mounting hardware is included. A nice addition are the four sex bolts (or through bolts), the strike plate filler, the door edge filler, and the 2-1/8" rim cylinder back plate. Having these components included eliminates the need to order them separately or finding you're without them should they be needed at the installation site. (See photograph 2.)

The head assembly of the ED22 is quite simple, employing only three moving parts and three springs where many other companies use more than



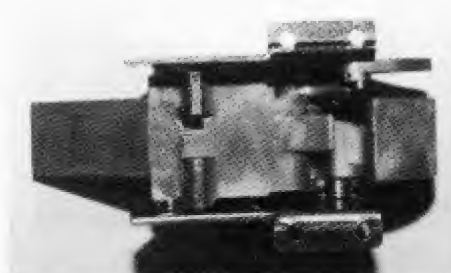
1. The APR rim exit device.



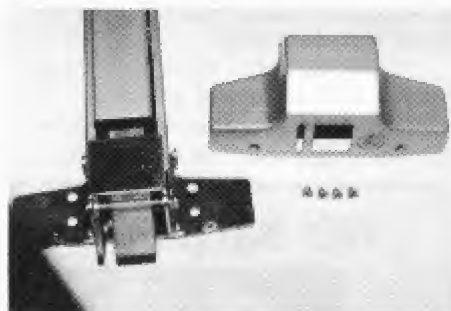
2. APR has made mounting simple by providing all necessary fasteners including sex bolts.

twice that to accomplish the same end. (See photograph 3.) The simple design of the head makes the unit less likely to fail due to worn components, and easier to maintain. While it is unlikely that it will need replacement, releasing two screws from the back separates the head assembly from the push-bar tube. (See photograph 4.) Removing four screws separates the latch assembly from the head back plate. (See photograph 5.)

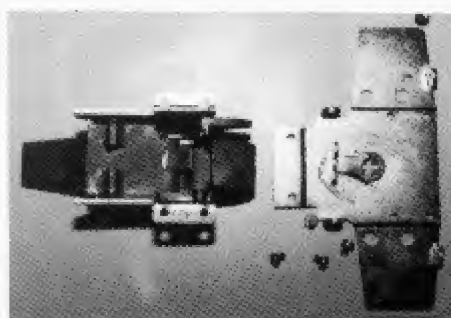
Also, you will notice that the head has four mounting holes. By fastening the unit at four positions, the unit is less likely to loosen by constant pivoting sometimes present in devices that fasten at only two points. APR instructions recommend four point mounting for heavy duty applications. For this article, however, we used only two mounting holes.



3. There are only three moving parts and three springs to the head of the APR device.



4. Notice the four mounting screw holes provided by APR. Using four mounting points instead of two makes for a more secure device.



5. The head of this APR device is simple to service and/or replace.

The unit was installed onto a steel door with mortar filled frame. The door has a deadbolt and a pull handle from both inside and outside. The door frame is in relatively poor condition and included some aging weatherstrip. (See photograph 6.)

The first step of the installation



6. Our door.

involved removing the inside pull handle, weather strip and making necessary door adjustments. Despite the adjustments, however, the door still did not close well.

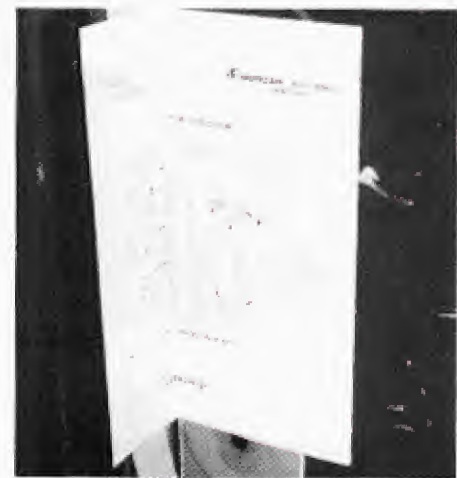
Two large holes remained upon handle removal, one of which will be covered up by the exit device. After removing the handle, we made a



7. Removing the pull handle left two holes in the door. One hole was covered by the device, the other was later covered by a piece of sheet metal.

centerline for the device at about 40" up from the floor. As seen in the photos, this door does not have any previous door preps and much of the mounting hardware is not required. (See photograph 7.)

With the centerline drawn the template is taped to the door and all of the necessary holes are marked out with a scratch awl. (See photograph 8.)



8. Marking the strike and device head mounting screw positions is the first step to installing an exit device.

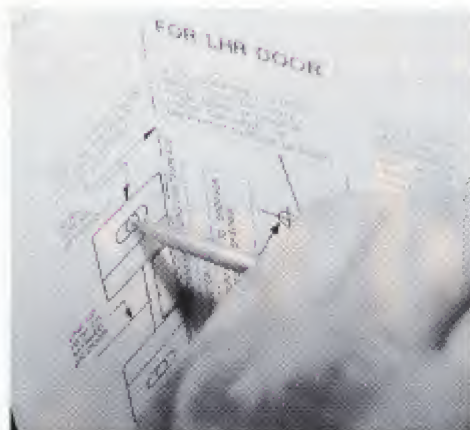
Because the unit is being installed for exit only, there was no need to mark for exterior trim holes and only six points were marked for drilling. The drill points were limited to two strike mounting screws holes and two head mounting screw holes. The two rear mounting bracket screw holes were marked later. The directions provided on the template of the APR device are very clear. Following these directions

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9. Using a scratch awl to mark the drill points.

made the installation very fast and smooth (See photograph 9.)

With the first phase of the installation complete (marking the door), we drilled the holes in the frame and door. The unfortunate part of drilling a mortar filled frame is the amount of time and/or material wasted. Once the high speed drill bit has broken through the steel skin of the frame, it hits mortar. An installer can opt for one of two directions: Either continue drilling the hole into the mortar, dulling the bit. Or, save the tip of the high speed drill bit by



10. After drilling, the strike holes were tapped.

spending the time to change to a mortar drill bit.

In either case, make sure that the holes are deep enough to accept the full length of the strike screws. Once the holes in the frame were complete we tapped them for the mounting screws. (See photograph 10.)

On a commercial steel door it is not advisable to mount the device using sheet metal screws. These fasteners have a tendency to loosen and rust, and are only holding onto a very thin skin or sheet of steel. By using sex bolts the strength and



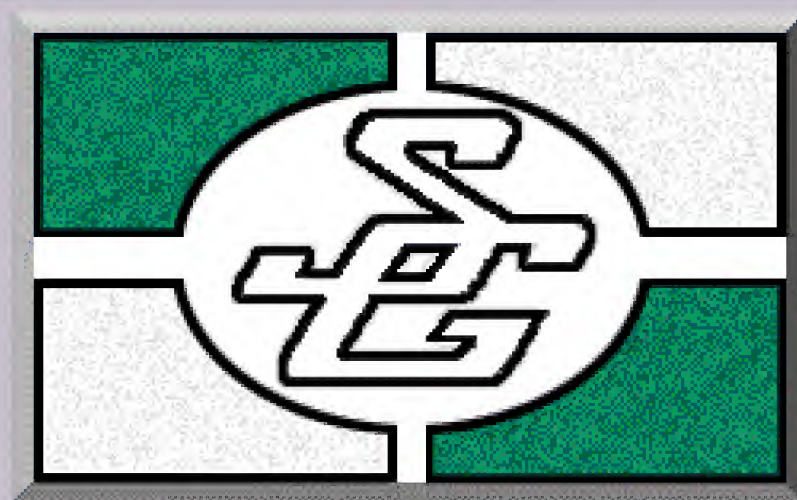
11. The two head mounting holes.

integrity of the device and door are enhanced.

Therefore, we drilled the two head mounting holes on the door for sex bolts provided. Using a 5/16" drill bit, we drilled through both sides of the door, making sure the drill was held perpendicular to the door, assuring that the inside and outside holes lined up. (See photograph 11.)

After drilling the holes, the female end of the bolts were tapped into position from the outside. The 5/16" holes allowed for a snug fit, making the alignment and fastening of the

Continued on page 26



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Continued from page 23

head and inside male bolts much easier. (See photograph 12.)

At this point, we attached the head using only the top mounting screw. (See photograph 13.) This allowed us to swing the back of the device up to the centerline and mark for the rear mounting bracket screw holes. (See photograph 14.) Here, again, we drilled and tapped the holes. The device was removed from the door and the rear mounting bracket fastened to the door. This completed the second phase of the installation.

After fastening the rear mounting bracket to the door, the rear portion



12. The sex bolts were tapped in.



13. The top screw of the device was attached...



14. ...and the bar raised to mark the mounting position of the rear mounting bracket.

of the bar was slid onto the bracket (see photographs 15 and 16) and the head fastened to its mounting position

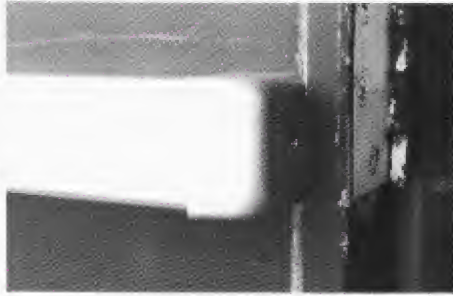


15. After fastening the rear mounting bracket the exit device is slipped into place.

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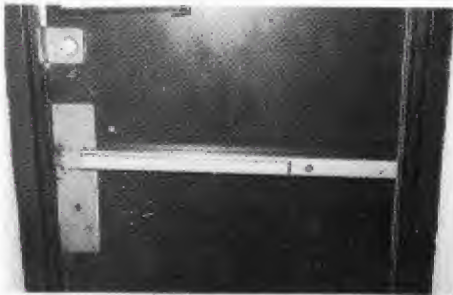
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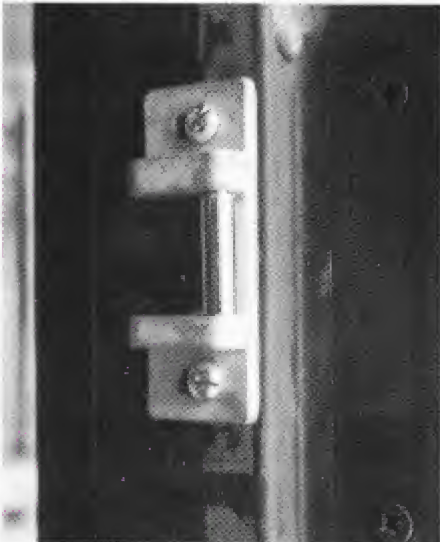
16. This cover is placed onto the rear mounting bracket.

(see photograph 17). This completed mounting of the exit device, phase three.



17. The head is attached.

The final phase is attaching and adjusting the strike and placing the cover over the head of the device. (See photograph 18 and 19.) §



18. The strike is attached and adjusted.



19. The head cover is put into place and the job is complete.

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Test Article #23 Automotive Security

To be tested in September 1993
issue. Details in insert in front of issue.

Porsche Car Alarm

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

Don't let the name Porsche scare you. Even when it means making keys for the Porsche alarm. Actually making keys for the alarm is quite easy. The switch for this unit is found on the driver's side of the car next to the door.

Before starting you will need a small flat blade screwdriver, a 25 mm (31/32") socket, 13 mm wrench, fine tooth saw or Dremmel tool, snap ring spreader and the Silca HU53 keyblank.

To begin:

1. Disconnect battery terminal.
(See photograph 1.)



1. Disconnecting battery terminal.

2. Open the driver's door and remove the body vent cover. This gives plenty of access room for removing and reinstalling the switch. (See photograph 2 and 3.)

3. Remove the plastic cover from the face of the lock switch by gently prying it off with a small straight blade screwdriver. Place duct tape, cardboard, or a rag below the screwdriver to prevent from scratching the body. (See photograph 4.)

4. Reach up into the car body and firmly grasp the switch body. (See photograph 5.) Then using a 25 mm socket, unscrew the lock switch retaining nut. Gently pull the switch down and out through the vent hole (See photograph 6.)



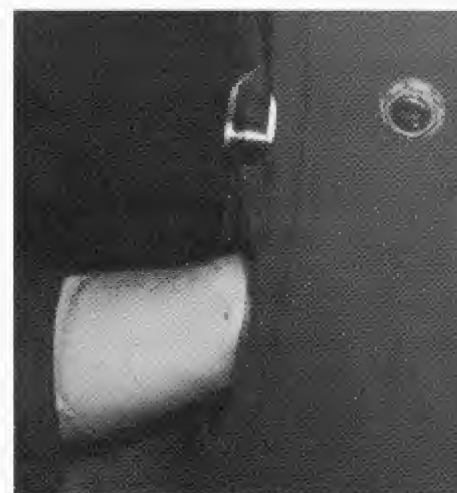
2. Removing the vent cover...



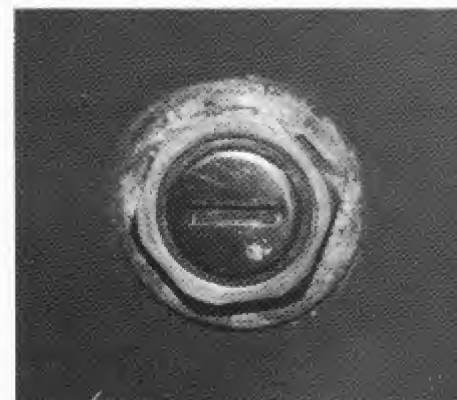
3. ...provides plenty of access room.



4. Take care not to scratch the body.



5. Reach up and grasp the switch body.



6. Pull the switch through the vent hole.

5. Mark and disconnect the wires from the switch. (See photograph 7.) And from here there are two routes that can be followed:

a) The ideal route is to replace the switch. The switch is a sealed unit and is not meant to be serviced. A switch comes with two keys, is a dealer item only, and costs roughly \$58.00. However, more times than not a switch is not readily available, or the customer wants a faster less expensive alternative.

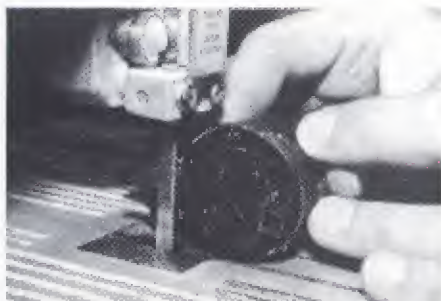
b) Remove the back of the switch. This can be accomplished by using a fine toothed saw or Dremmel tool. (See photograph 8.) Cut just below the

Continued on page 30

Continued from page 28



7. Mark and disconnect the wires.



8. Removing the back of the switch.



9. Proper position for cutting.

edge of the sealed cap as a deeper cut may cause damage to the back of the plug or other internal components. (See photograph 9.)

6. With the back removed, mark the pawl and plug to make sure they are reinstalled the same way. (See photograph 10.)

7. Remove the snap ring from the back of the plug. (See photograph 11.)

8. Remove the pawl. (See photograph 12.)



10. Properly mark the plug and pawl.

9. Push the plug out of the switch. Be careful not to lose the tumblers and springs or the rubber seal that surrounds the plug. (See photograph 13 and 14.)

10. Insert a Silca HU53 blank into the plug and read the wafers. Use the spacing and depth specifications at the end of this article to cut the key.

11. When finished cutting the key,

Continued on page 32

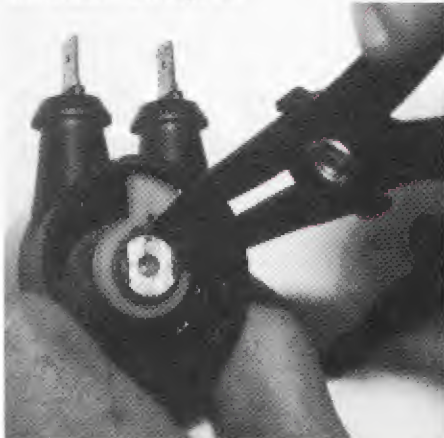


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Continued from page 30



11. Removing the snap ring.

replace the plug, don't forget the rubber seal. Attach the pawl and snap ring.

12. To attach the back of the switch, use a plastic epoxy. Mix the epoxy as directed and apply to the rim of the switch body. Place the back of the switch onto the switch body and wait until set.

13. Replace switch into vehicle, reversing the above procedures.

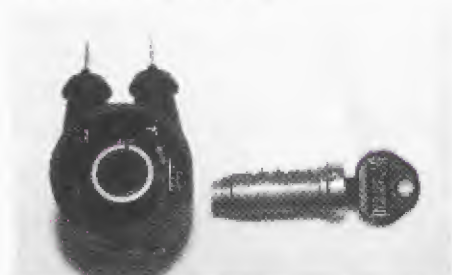
14. Reattach the battery and test the switch.



12. Removing the pawl.



13. Removing the plug...



14. ...from the switch.



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Spacing	Depth
1 .095	No cut
2 .193	.290
3 .290	.250
4 .389	.227
5 .487	
6 .584	
7 .683	
8 .781	

8

Test Article #24 **Electronic Security**

To be tested in September 1993 issue. Details in insert in front of issue.

Electronic Hardware

"This article is part of our Security Certificate Program. In a future issue, the content will be tested."

Last month we spent time looking at the various parts and conditions of the door and frame that need to be considered before choosing electrified door hardware. This article describes the physical dimensions of the hardware that need to be considered.

Because electric strikes are the most common hardware used, we will cover them first, followed by electric magnets.

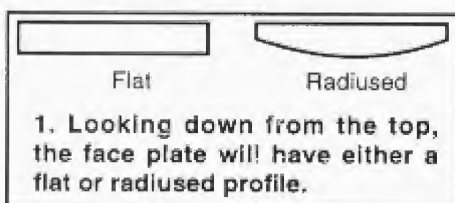
ELECTRIC STRIKES

For electric strikes there are six characteristics to watch for: Face plate dimensions, body and solenoid dimension, lip dimension, lip-latch compatibility, handing and finish.

Face plates

There are three face plate conditions to consider: Shape, size and corners.

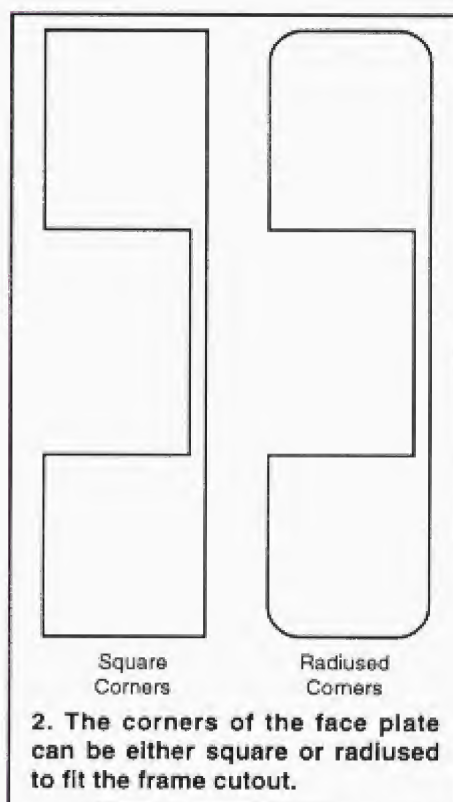
Face plates come in one of two shapes, flat or radiused. The shape refers to the contour of the face plate. In most installations the face plate is flat, and sitting flush with the frame. (See illustration 1.)



Installing a strike into a set of double narrow stile aluminum doors, however, often requires that the face plate be radiused to match the curved bevel of the stationary door. (The door into which the strike is installed.)

The corners of a face plate may be either square or radiused. The radiused for this dimension must not be confused with the radiused of the shape dimension. (See illustration 2.)

Typically, steel and wood frame applications require a square corner on the face plate. The round or



radiused corners are common to aluminum doors and frames.

Size is the final face plate dimension to consider. The most common face plate size is the ANSI 1-1/4" X 4-7/8" strike cutout used in most steel and wood frame applications.

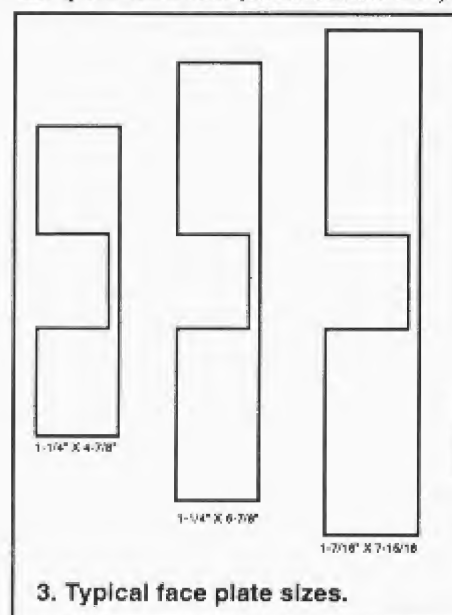
While not used as frequently, a 1-7/16" X 7-15/16" cutout is also used for steel and wood doors.

In aluminum door applications, the strike hole that is common to the Adams Rite swing bolt cutout requires a face plate dimension that is slightly taller than the standard 4-7/8" height. Therefore, a strike with a 1-1/4" X 6-7/8" dimension is often used.

It should be noted that these different face plate sizes have been used in all applications, whether steel, wood, or aluminum. Also, different companies may have slightly different

face plate sizes and configurations for differing applications.

The important issue here is that consideration be given to the face plate configuration and the application. A wood 1-3/8" thick door and frame requires a strike with much different face plate characteristics than an aluminum 1-3/4" thick door and frame. Knowing the application's dimensional requirements and limitations will determine the proper face plate to order. (See illustration 3.)



Body and Solenoid Dimension

The body and solenoid dimension is also critical and is dependent on the dimensions of the cavity into which the strike is to be installed. While the width of such a cavity is normally not a problem, the depth and height often are.

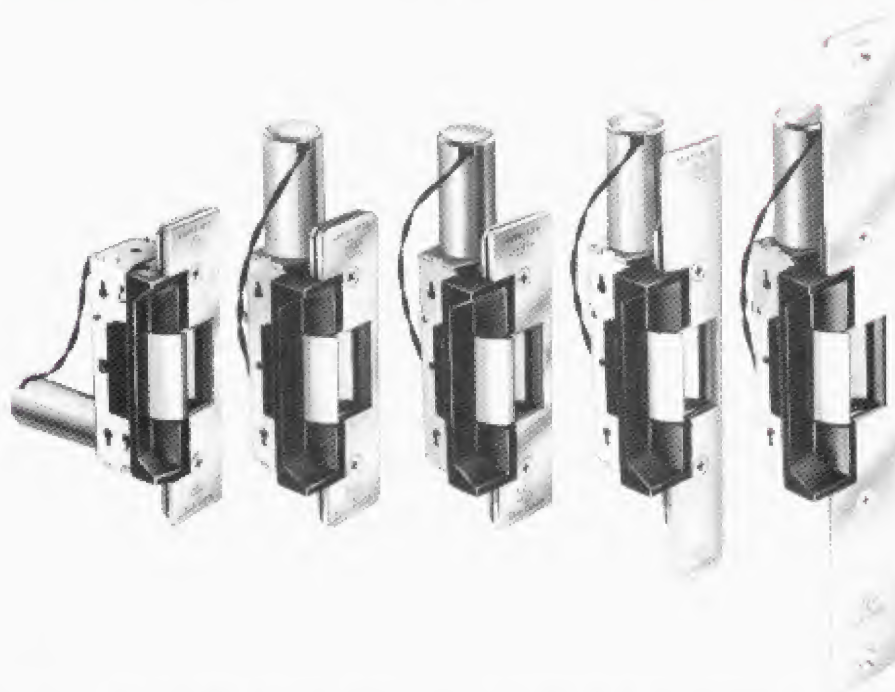
There are essentially two types of electric strike bodies to consider. The first is common to Adams Rite, Precision, and some Folger Adams Strikes. In these units, the solenoid for the strike is attached to the outside of the strike chassis. The solenoids are typically mounted in

either the vertical up or vertical down position or straight out the back. Some manufacturers, such as Precision, have the solenoid mounted off to the side of the chassis on some models. (See photograph 4.)

The other type commonly seen, is where the solenoid, or a coil, are contained within the chassis or body of the strike. Rofu, Rutherford and some Folger Adams employ this type of construction.

Now, when it comes to installation, it is critical that the cavity into which the strike is being installed is capable of holding the chosen strike. Units that have the solenoid attached vertically up or down, typically require a hollow frame. Often these units cannot be installed into mortar filled steel frames unless enough mortar has been removed to accept the projecting solenoid.

On strikes with the solenoid attached to the chassis back, the frame must be able to accept the extra depth of the solenoid. Generally, these strikes are used on wood frame applications with metal or wood stud framing. The wood or metal studding behind the door jamb can be mortised



4. Various Adams Rite strikes. Notice how the solenoid is attached to the chassis.

or cut out to accept the solenoids on these types of strikes.

For any strike, the depth, height and width of the frame cavity must be dimensionally compatible with the strike body.

While most aluminum frames have a depth of 1-3/4" to 2", there are instances where they are only 3/4" deep. To date, there isn't an electric strike that will fit this application. Alternate electric hardware must be used.



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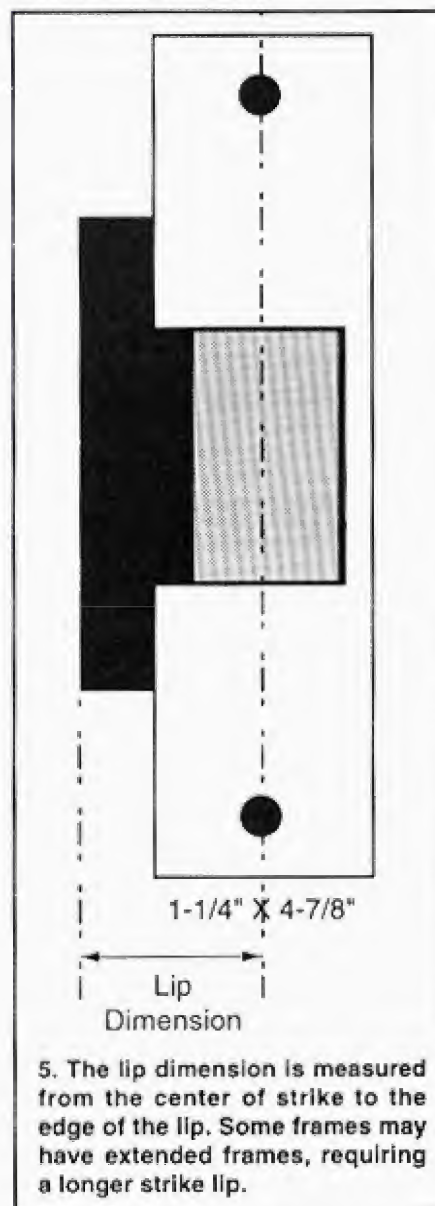
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In mortar filled frames, the smaller body styles offered by Rofu, Rutherford, Hanchett Entry Systems and others can be used.

Lip Dimension

The lip dimension is the distance from the center of the strike cut out to the edge of the door frame. Where this measurement is most critical is in center hung door applications. Here, the standard strike lip dimension (typically designed for a 1-3/4" thick door that sits flush with the frame) does not extend far enough to reach the front of the frame. In such installations, a strike with an extended lip needs to be used. (See illustration 5.)



Lip-Latch Compatibility

The lip or jaw of an electric strike must have the correct depth, and be in the correct position with the latch on the door to work properly. The lip

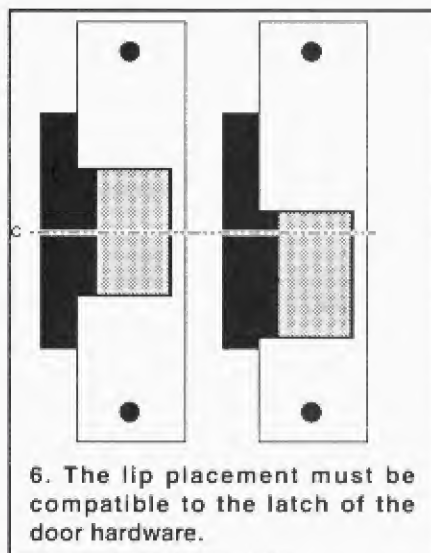
or jaw depth is made to accept latches and/or bolts that are of certain lengths. Most commonly, strikes accept the latches of most knobsets with a 1/2" or 5/8" throw.

On fire rated hardware and mortise locks, however, the lip depth must be able to accept latches with a 3/4" throw or projection. The standard strike, while it may allow these latches to enter the lip area, do not allow the 3/4" latch to fully extend. This can result in the unit not deadlatching or locking properly as well as problems with the latch hanging onto or snagging the strike lip every time the door is opened.

Another consideration is the position of the lip. On standard strikes the lip is centered between the top and the bottom to align with the latch in the door. Mortise locks, however, have the latch offset from center. If the lip of the strike is not in line with the latch, the strike will not work. (See illustration 6.)

Currently, many strike manufacturers have realized this offset of the latch on the mortise unit, and are making strikes with a lip compatible for this offset.

A final consideration when looking at lip requirements is whether the application includes a deadbolt



function. Many mortise locks have a deadbolt. To accommodate this bolt (if the customer wishes to retain its use) an electric strike that accepts the projection of the bolt must be used. Several manufacturers make units that do so. However, the strike cannot be operated with the deadbolt in the thrown or locked position. These strikes simply provide a cavity for the deadbolt to use when the door is to remain locked by use of the deadbolt.

If it is desired that the strike

operate with the deadbolt thrown, Hanchett Entry Systems offers a strike that accommodates this operation.

Handing

Due to the offset nature of the mortise lock's latch alignment, many strikes are handed. Therefore, it is necessary to include the handing of the door in such cases.

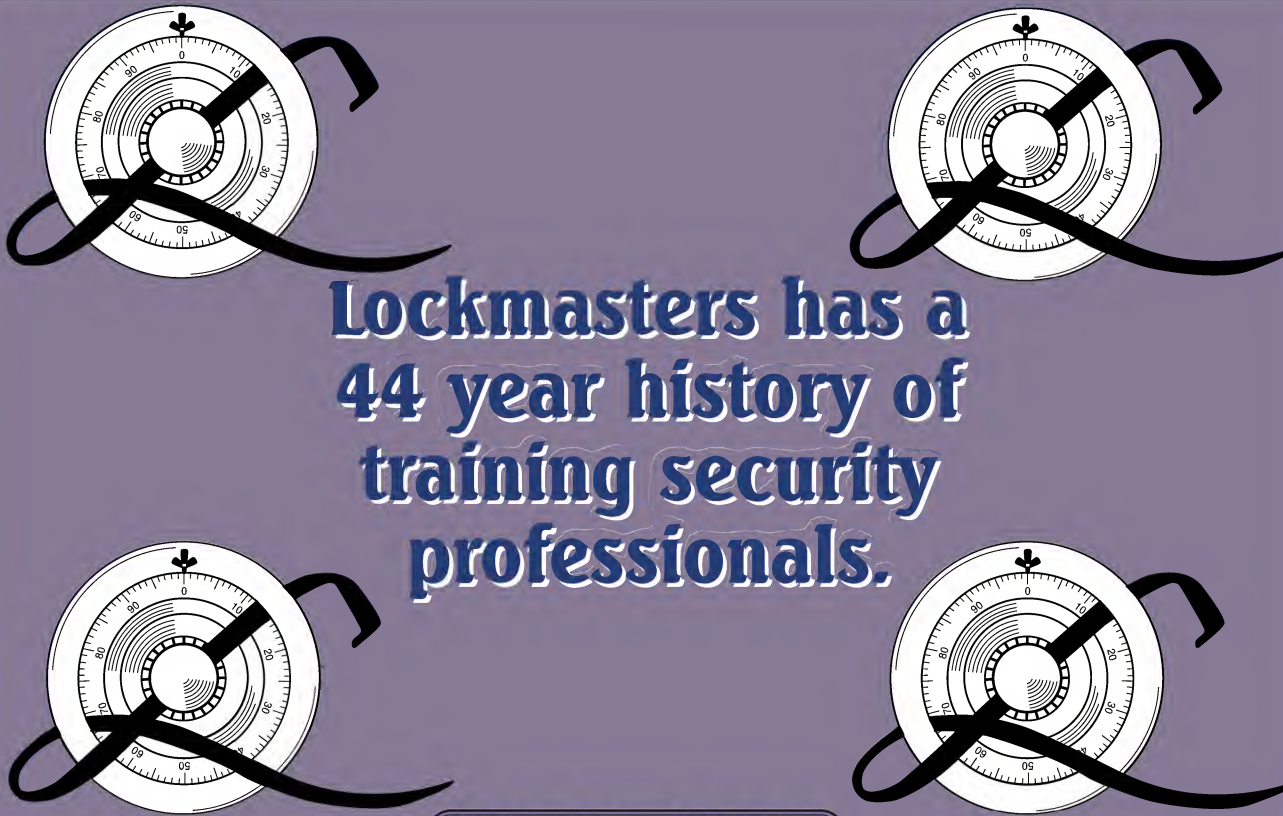
Finish

Electric strikes come to match standard hardware finish requirements. Many manufacturers allow for custom finishes as well.

ELECTRIC MAGNETS

The use of magnetic locks has been increasing over the years. Initially these locks were used only in applications where a strike could not be used. And, until recently, were restricted to surface mounted pull apart applications. Currently, however, concealed, shear type units are becoming more popular where aesthetics may be an issue.

While the shear type units follow many of the same installation requirements as the electric strike (frame cavity dimensions, etc.) the standard surface mounted units require that only a few frame and door



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dimension requirements be known.

The first consideration in mounting a magnetic lock is to which side of the door it is being mounted. They can be mounted either from the push side of the door or from the pull side. The dimensions for the necessary bracketing depends on which side it is mounted.

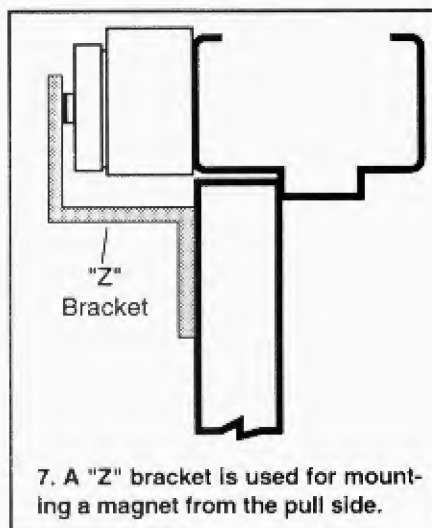
Pull Side

If the lock is to be mounted from the pull side of the door, the magnets are typically fastened to the top frame of the door. A "Z" shaped bracket is fastened to the door for the armature plate.

Under normal conditions the door and frame on the pull side are flush and the magnet and "Z" bracket with armature can be fastened easily to the door without the need for shimming or special bracketing. (See illustration 7.)

But where the top of the frame is not wide enough to support the mounting screws of some magnets or where the door is not flush with the frame, mounting plates and shimming may be necessary for a correct installation.

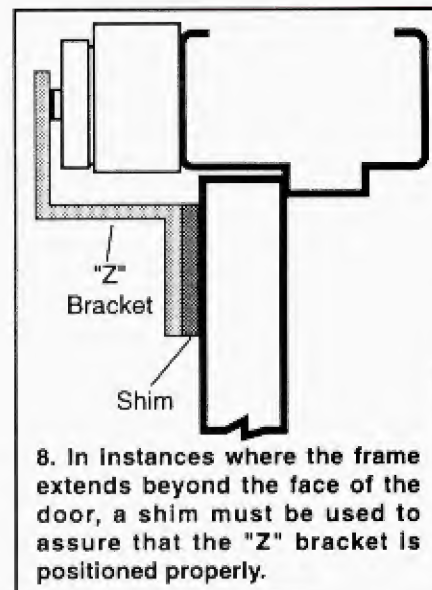
To make it simple, the mounting of the lock and armature are designed



for a flush door and frame. If a mounting plate is needed to fasten the magnet to the top of the frame, then an additional plate of equal thickness must be used to mount the "Z" bracket and armature to the door. If the face of the frame extends out past the face of the door, the "Z" bracket and armature must be mounted to a shim or plate whose surface is flush with the face of the frame. (See illustration 8.)

Push Side

The more common of installations



is from the push side of the door. For this type of mounting two dimensions are critical: the reveal and the door stop height. It's these measurements that determine whether a filler plate is needed.

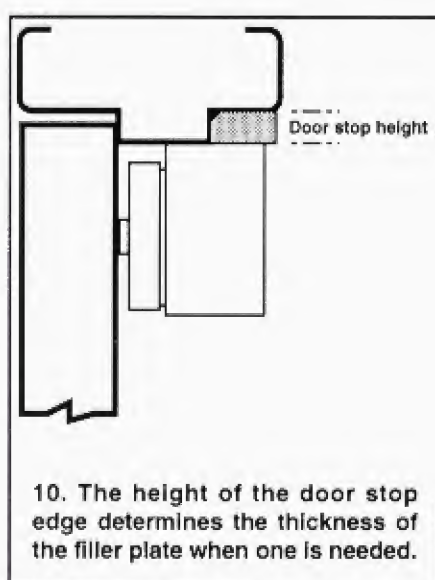
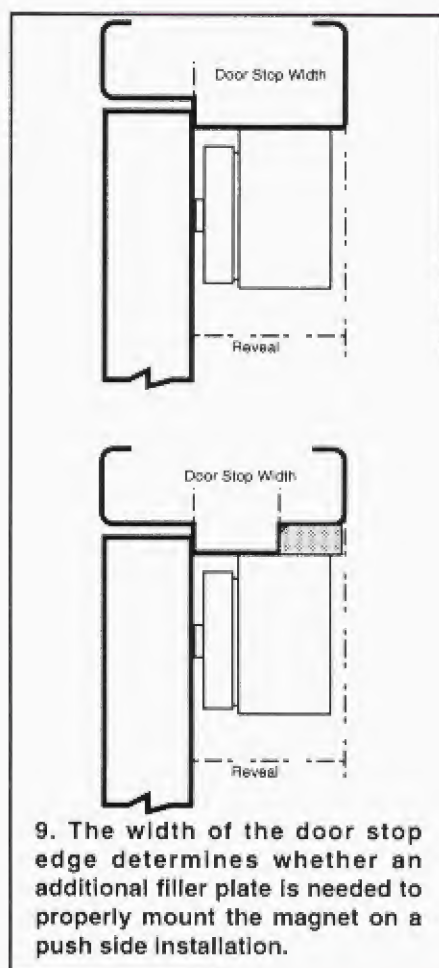
The reveal is the distance from the face of the door (when closed) to the edge of the door frame. The door stop width makes up part of this measurement, and is critical when determining whether a filler plate is

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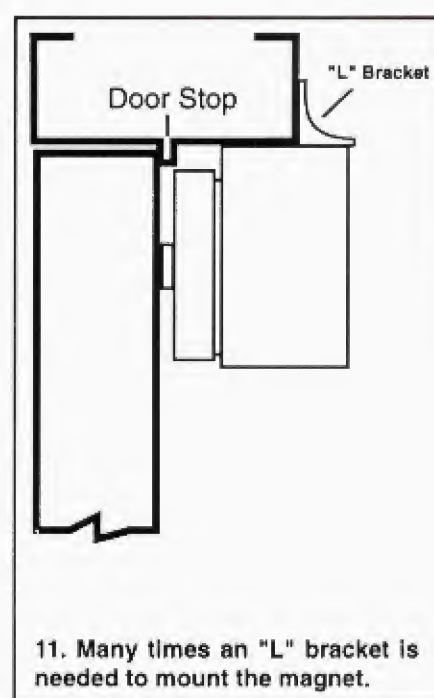
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needed. When the stop is wide enough, the magnet can be attached directly to the frame. If the stop is narrow, however, a filler plate is needed to firmly attach all of the magnet's mounting screws to the frame. (See illustration 9.)

The door stop height is also a critical measurement and determines the correct filler plate dimension should one be needed. (See illustration 10.)

Aluminum doors often have a



narrow reveal and no door stop or a very narrow strip that serves as a door stop edge. In these applications it may be necessary to use an "L" bracket to attach the magnet. Again, the reveal measurement will determine the exact "L" bracket dimension. (See illustration 11.) §

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Mini- Section...

Locksmith Schools

In this section you will read about a variety of the institutions of learning for the locksmith profession.

Acme School

Acme School of Locksmithing is approved by the Illinois State Board of Education.

The founder and director, William T. Beranek, who is a qualified locksmith and safe technician, has been practicing his profession for the past 25 years.

The objective of the locksmith program offered at Acme School is to teach the basic skills one must know to begin a career in this field. This course was developed for the individual with no prior experience or training or for someone with previous experience who wants to further his abilities and techniques. Locksmithing is a field in which one may work full or part time, day or night, or whenever one's present daily schedule allows.

The Acme Locksmith course is taught in a ample space classroom designed to accommodate 10 students per session very comfortably. This is a "learn by doing" and "hands-on" training course.

Mr. Beranek has recently added four Advanced Specialty Courses available for anyone with basic locksmithing skills.

There is also a fully-equipped lock shop on the premises where students may observe qualified locksmiths in action and practice themselves.

Time wise, the two weekday class is excellent for the out-of-town students. Acme School has had the pleasure of instructing students from as far away as Japan and New Zealand, thus having the delightful opportunity to also learn much about their culture and customs.

Information pertaining to lodging for out-of-town students is available upon request.

**For FREE Information
Circle 318 on Rapid Reply**

The Golden Gate School of Lock Technology

The Golden Gate School of Lock Technology, located in Oakland, California, was founded and established in 1970 by Edwin W.L. Scott, Jr.

Since its opening, the school has dedicated its efforts toward providing the finest in "hands-on" practical

locksmith training. The school also offers residential training in electronic security and correspondence training in locksmith business management. The Golden Gate School is licensed by the California State Board of Education.

All students attending the school are thoroughly screened, photographed and registered in school files. Students are also required to be fingerprinted and records checked by the Department of Consumer Affairs for the State of California.

Training is given in all aspects of locksmithing on basic and advanced levels, allowing any business to look upon the graduate as an asset to his company, since he would not have to spare as much time to train employees.

The Golden Gate School is unique in several ways. The teaching technique has been praised by students: graduates from the first class to the most recent are welcome to call or visit the facility at any time. Additional instructors are readily available when needed.

The Electronic Security course is taught on a level that is easy to comprehend because of so much "hands-on" training. The subjects include: Basic Electricity; basic electronics; wiring diagrams; running wire; basic residential and auto alarm systems; closed circuit television, and access control systems, as well as troubleshooting, sales and pricing procedures.

Locksmith and electronic security classes are only held twice a year because the school's goal is to train potential employees. The Golden Gate School does not accept grants or G.I. bills; students are accepted more on their willingness to learn and their interest in bettering the industry as well as themselves.

**For FREE Information
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HPC's Learning Center

HPC's Learning Center is a private state accredited vocational school that is located in the Northwest Chicago, Illinois area. The school offers locksmithing classes including comprehensive lectures, as well as hands-on training with the widest

variety of tools, key machines and locksmithing equipment.

The classes are taught in two parts. Both sessions are held two nights a week for 3-1/2 hours. Both sessions are also available in an intensive format (12 days at 7 hour/days). The first session consists of key blank identification, key duplicating, changing combinations of pin and disc tumbler locks, key-in-the-knob (service and installation), mortise locks (service and installation), picking and car opening (Ford, GM and Chrysler), impressioning, code cutting, code books, software and masterkeying.

The second session consists of tubular locks, servicing high security (Abloy, ASSA, Emhart and Medeco), servicing and key cutting high security dimple locks (DOM, KABA, KESO, and Multi-Lock), servicing Ford 10 cut, VATS/PASS with interrogator, air bag columns and foreign auto lock servicing installation on glass and aluminum doors, basic electricity, access control (Corkey, Simplex and Marloc), advanced masterkeying and computerized locksmithing, shop management, safe lock servicing, manipulation and the theory of safe penetrations.

Learn your locksmithing skills from the company that continues to be a leader in the locksmithing industry...HPC, Inc.

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Circle 319 on Rapid Reply**

The Lock And Safe Institute of Technology

The Lock and Safe Institute of Technology affords its students a complete locksmithing education. The students will learn from basic to advanced subject matter. This will include: master pinning, picking, impressioning, Ford and General Motors sidebar system GM vats, air bag systems, sidewinder systems, safe techniques including lock-out, repair and manipulation of safes, safe deposit locks, all types of pick resistant cylinders, door closer, interchangeable cores, detention locks, lock-out techniques, keyless entry systems, electric and magnetic door locks and

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many tricks of the trade.

The Lock and Safe Institute of Technology endeavors to provide each student with and excellent educational experience involving quality faculty and administration. Students are taught in a classroom setting with demonstrations and class projects. However, students accompany instructors on actual jobs in the field - Hands on techniques on doors, autos, safes and safe deposit locks. The student will help install and repair all types of locks on various types of doors. Door glass installation will be learned as well as hinge adjusting and replacement. Business techniques will show the students how to set up their own business, advertise and sharpen their accounting skills. For those who wish to seek employment, the school will help secure a locksmith position in the area of choice.

The school is located minutes from the beach and convenient malls. The institute will help locate lodging convenient to the school. The Lock and Safe Institute teaches in an informal and easy learning atmosphere. Classes will not exceed 25 students and usually are at 8-10 students. Students may start the program on any Monday.

**For FREE Information
Circle 320 on Rapid Reply
NRI Schools**

For almost 80 years, NRI has been a leader in the development and implementation of at-home hands-on training in entry-level trade, technical, and professional fields.

NRI currently enrolls students in courses ranging from locksmithing and small engine repair to computer programming and microcomputer servicing.

NRI knows that an average sized American town of about 50,000 people has over 100,000 home and apartment locks, and close to 70,000 automobile locks. Adding the enormous number of business locks, with several sets of keys for each, obviously produces a huge market for locksmithing services. Today, there is one locksmith for every 18,000 people, creating a big demand for qualified locksmiths.

NRI's training in locksmithing and electronic security includes thorough step-by-step lessons and professional locksmithing equipment such as the Ilco KD5 Key Making Machine, giving students hand-on experience in this exciting, easy entry, high profit field.

NRI's course provides the skills and equipment for today's in demand locksmith. NRI's locksmithing course covers everything from picking a lock to making a key from manufacturer's code. Each lesson is written in clear, easy-to-understand language, and features an abundance of photographs and illustrations to demonstrate each important concept. In addition, NRI instructors use a unique combination of

cassette tapes and diagrams to ensure that students really understand everything covered in the lessons. A special series of supplements, called "Shop Talk," provides down-to-earth tips and professional techniques to enable students to start earning, even before they've completed their course.

**For FREE Information
Circle 322 on Rapid Reply**

**Pine Technical
College**

Pine Technical College, a campus of Minnesota's Technical College System, is located in Pine City, Minnesota, 60 miles north of Minneapolis/St. Paul. The PTC campus provides a friendly,

small town atmosphere, amidst the lakes rivers and woods of northern Minnesota.

As part of Minnesota's higher education system, Pine Technical College offers several accredited, residential educational options for students interested in a career as a locksmith. Under PTC's Locksmithing Technician Diploma, graduates complete 96 credits, or approximately 1500 hours of instruction. A 108 credit AAS Degree is also available.

Additional diploma/degree options include Security Management, Security/Alarm Systems and Security Sales. All are resident, on-campus

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NATIONAL

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by Dale Libby

Team Safecracking

"Fifty carbide drill bits crumbled before the Monster Mosler from Uranus died and opened."

Team Safecracking. What is it exactly? How does it work? How does one charge for the services of two or more safe technicians? These and other exciting concepts will be addressed in a real life re-enactment as Dale and Little Tommy tackle a Mosler TRTL30 money chest.

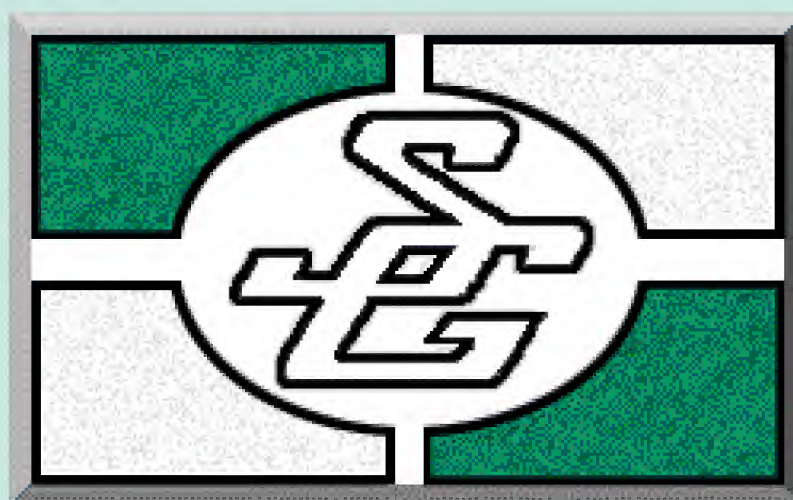
A team of safecrackers consists of two or more safemen who work coherently and intelligently on a safe or chest or vault door. This does not diminish the importance of either team member or make one more important than the other. This is a team effort and usually results in the safe or chest being opened easier and more quickly than if only one person worked on it.

A team is not just two individuals that work on a safe. A team is a group of two well coordinated individuals that work together, each complimenting the other. I have worked many times with the locksmith or safeman that has called me in to assist in an opening. They help me, they observe, they learn, and I appreciate their help.

This would be labeled two man safe opening, and could be close to a team, but not necessarily a total team effort. Dave McOmie often teams up with other safemen to tackle the hard ones. I have been lucky to find Tom Powers of Powers Safe and Lock. We are both friends and have worked well together for over a decade.

We do not talk a lot, but we point out our thoughts and ideas. We settle on a plan of action and we do it. All of our combined efforts have resulted in successful safe, vault, and money chest openings. We have *always* learned something consequential and meaningful which I hope to pass on to you, my readers. Let us now set the stage and meet the Monster.

Third party safe openings are usually a surprise. Tom got the job from another locksmith who stated that he had a customer with a Mosler safe that needed to be opened. He gave Tom the job. Tom asked me if I wanted to tag along and assist in the safe



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opening. Imagine our surprise when we met and discovered that the "safe" in question was a Mosler TRTL30, a money chest with a Mosler manipulation proof lock.

There is a lot that can be learned by looking at a safe before any hard diagnostic work is done. First, is the lock hand or key change. This can be determined by looking on the dial ring for a change index mark. There was no mark. We tried the dial which turned quite hard. At zero, the dial pulled out and would rotate right or clockwise to 80 before it stopped. A manipulation proof lock.

Logic dictated here which lock was used. We looked in the Safeman's guide for a duplicate of the chest in question, but found none that were exactly the same. This was a compound unit, with a very large fire safe below, and the money chest mounted on top. Total weight was about 2000 pounds. The measurements were about 4 x 4 x 5 feet high.

The dial had the black plastic insert that could have denoted either a 302/402 or 120 series lock. The dial was chrome and spy-proof. Choosing the wrong lock would mean picking the incorrect drilling point, which is something no one wants to do on a Mosler Chest. The simple fact that the dial pulled out gave us the clue that the

chest in question used the CD-120 lock with the MP option.

The lock was mounted upside down in the round door. The opening bolt was at three o'clock. This unit incorporated a right handed lock mounted left hand. This means that the opening lever was on the bottom of the lock and had to work against gravity.

Because of the placement of the unit in a file room and the way it was built in, we were limited to a frontal attack. After pulling the dial and the dial ring, the real work began.

Here is where a good team comes into action. We decided to use the McOmie Files (a benefit of being a member of the *National Safeman's Organization*) that were specific to this lock. He mentioned that there was RELSOM (Mosler spelled backwards) in his notes. What an understatement.

We measured twice, and started our hole. First benefit was that the hole was straight and at a right angle to the door. I held the drill motor straight and true, and the hole was perfectly straight and flawless. (As we found out 6 hours later.)

We both put pressure on the one man drill rig. When the carbide drill bit needed replacement, Tom or I would change it and give the drill and the

chuck a few moments to cool off. The other would happily attack the door with a sledge and punch. After a few minutes, we would start drilling again.

The true power, ability and capacity of a team is to give the other members of the team encouragement when things are going bad. When working on a Mosler TRTL30, there is a lot of reassurance and inspiration needed.

In fact, after five hours of drilling, we were almost ready to call it a day, and we were close to quitting. We had 40 carbide drill bits into this opening, and were measuring our progress in 32nd's of an inch. That is not a lot of progress to measure. We broke for a late lunch to regroup and to rethink our tactics.

The food helped. We again attacked with a new vigor. Determination won the day and after removing the last and 50th shattered/melted carbide drill bit a piece at a time, we hit the opening lever and the wheel gates clearly. A couple of minutes later the door was open. Thirty minutes later we presented the revised bill to the advertising agency and were paid on the spot. THIS WAS MY REQUEST.

Here are some statistics about this opening. Tom and I used 50 carbide drill bits between us, 10 high speed

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by Jake Jakubowski

The ADA...A Sleeper

"If the ADA had been around a long time ago, everyone would have wanted to grow up and be a locksmith!"

If The Americans With Disabilities Act (Public Law #101-336) were an automobile, the "old gang of mine" would have called it a "sleeper." A sleeper was a vehicle that looked benign and unremarkable, but had been "souped up." That is, the engine (and perhaps the transmission) had been modified to give the car more power and speed than when originally manufactured.

The idea of a "sleeper" was to lull the owners of "rods," and other "hot" cars into a false sense of superiority... and then "blow 'em off the road." In a financial sense, that's what the ADA is going to do to over five million businesses in this country. That doesn't mean the ADA is going to put them out of business. It does mean that the ADA is definitely going to get their attention.

It also means that as a locksmith, you are in a position to rake in some serious shekels because The Americans With Disabilities Act just handed you (potentially) one of the juiciest and most profitable "plums" ever. Outside of defense contractors, the legal profession, and Agri-business, the government seldom smiles (however unintentionally) on any industry like they did ours with the implementation of the ADA!

The ADA *mandates* that any type of business from amusement parks to zoos, and virtually everything in between, must "provide goods and services (to the disabled) in an integrated setting" and "make reasonable modifications in policies... that deny equal access to individuals with disabilities."

Further, the business community is required to "remove architectural and structural barriers" in existing facilities where "readily achievable," unless such modifications "would fundamentally alter the goods, (or) services" offered. With the first priority being given to modifications that would allow disabled

individuals to "get in the front door."

It's the getting "in the front door" part that is going to allow you to take advantage of the potential profitable business that the ADA will, literally, dump in your lap. Every doctor's office, day care center, dry cleaning establishment, delicatessen and dumpster maker in America is *required by law to make their businesses accessible to the disabled!*

Consequently, there are over five million (public accommodation, or service sector) businesses in this country that are going to need lever sets on entry and interior doors. Over five million businesses that will need push/pull hardware on their doors. Over five million businesses that need the services of a locksmith! And, that 5 million *does not* include warehouses, office complexes, apartment buildings, private schools or State and Local governmental agencies which are also covered by the ADA!

The *only* specific exemptions are churches and private clubs. Private clubs are exempted only to "the extent that the facilities of the private club are made available to customers or patrons of a place of public accommodation." For example, if a club offers bingo to the general public, or allows the the public to rent, lease, or otherwise utilize their facilities for non-club activities, that club must comply with the ADA.

Examples of "barrier" removal measures would include installing ramps, making curb cuts at sidewalks and entrances, rearranging tables, chairs, vending machines, display racks, widening doorways, and installing grab bars in toilet stalls. Other measures to "get in the front door" would include the installation of push/pull handles (U-shaped) and lever type entry sets, rather than standard door knob type hardware and acceptable panic hardware.

In fact, the ADA specifically stipulates that: "Handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms and U-shaped handles are acceptable designs." Now, try to tell me the ADA isn't the biggest potential blank check you've ever been handed!

Consequently, in order to comply with ADA mandates (starting at the front door), old-style door knobs must be replaced with leversets. Square, sharp angled, door pulls must be replaced with rounded, U-shaped pulls, or the U-shaped pulls installed on the door as an auxiliary pull. Restroom door hardware must be replaced with push/pull type hardware, or leversets. Steps must be replaced (or augmented) with ramps, etc. Those changes are required in *every* business, warehouse, office complex or local governmental agency that you already service!

There was once a book titled "Acres of Diamonds." I can't remember whether it was authored by Napoleon Hill, or Clement Stone, but it was written to motivate you to pick up the "diamonds" that lay at your feet. If the ADA had been around when the author wrote the book, he would have probably urged his readers to become locksmiths!

Once you have made the front door barrier free, other provisions of the ADA will govern a variety of things such as, counter height, water fountain height, aisle widths, "accessible paths of travel," carpet pile height, wheel chair accessible tables, etc., etc., etc.. The list is long and in certain situations even applies to people who run businesses in their homes. Much of it doesn't directly apply to our trade. Yet there are provisions that cover door

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Mini- Section...

Income Opportunities

There are a lot of products which the locksmith can add to his inventory in order to make security profits.

Detec's Exclusive Mr. Chime™ Line

Mr. Chime™ has developed a line of low cost, easy to install, battery operated, wireless door announcers, that welcomes customers, clients and visitors, and also deters would be intruders.

The product works on any type of door or doorway. The chime can be mechanically operated by the visitor or operated by passive infrared detection. The chime can be self contained, or wireless remote. Back and front doors can be protected wirelessly, with two different sounds, to identify the opening entered.

Seventy percent of all businesses employ fewer than ten people per business, which represent a huge potential client base for locksmith business. The locksmith, Mr. Chime™

dealer, can hire door to door salesmen on a strictly commission basis, making calls in industrial parks, office complex, medical and professional centers. On the basis of our market tested results, of using door to door salesmen, they averaged 8 to 10 sales per day per salesman. Providing discount certificates for locksmith products and services, the locksmith can generate substantial extra income.

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Become a Personal Security Protection Center

Customers come into your store to increase the protection in their homes and places of business. You know that. What you may not know is that

locksmiths nationwide are finding out their customers look to them for protection they can rely on in every segment of their lives. This includes personal time while walking, shipping or traveling to work.

Personal Security offers you the chance to turn your store into a profit center with many quality security products such as pepper fortified Mace. This new Mace combines CN tear gas and the ultimate stopping power of OC pepper to create the best of both world's in a self-protection spray.

This is the time to cash in on the advantage of the personal protection market. After all, it is the fastest growing retail segment in America today. Personal Security can help you create impulse sales for your customers while providing

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SRI
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SRI and Steve Young are working together to bring you the best in locksmith tools and supplies.

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Personal Security

Continued from page 48

them with safety they can depend on. Find out how you can become a Personal Protection Center for your area.

For FREE Information
Circle 324 on Rapid Reply

Kustom Key's LaKey Line

Kustom Key's newest line, LaKey, offers the locksmith professional an attractively embossed large bow brass key blank for their customer's home or office. Their size makes them perfect for the senior citizen or handicapped customer who may need a key that is easy to manipulate. Customers will also like how convenient they are to find on a key ring in the dark. Their good-looks are ideal for the "stylish-minded" customer who is bound to have friends asking where they found such a handy and attractive key.

The starter kit comes with a colorful easel display and window poster that aids in selling the item to your walk-in traffic. LaKey is an inexpensive specialty item that the locksmith can stock without having to make any sizable investment, yet still meet the need of the customers. (The starter kit costs only \$68.60 and refill minimum is only 50 keys - 5 per keyway and design). Available in the SCI, ARI, DEI, YI WR3, WK1, and KW1 keyways, LaKey, is a great new product to carry in your shop's key department.

For FREE Information
Circle 325 on Rapid Reply

Quorum's Security Products For Today

Home and business burglaries are on the rise! According to U.S. Department of Justice statistics show that over six burglaries are committed every minute of every day nationwide. Remarkably more than 93 percent of all homes are unprotected. Two of the major reasons why individuals do not have, for example, a security system is cost and ease of installation. This is where you as a locksmith can offer your service and expertise.

Quorum International, a global leader in electronics manufacturing, has responded to overwhelming consumer demand with innovative state-of-the art, high quality and affordable products to meet this need.

The A-160 Home security monitor, for example requires no installation other than plugging in, and is designed to detect forced entry of locked doors and windows. Unlike most other security systems it does not require wiring to contacts on doors and windows. Because the system does not operate by detecting motion, it enables the residents, their children and pets, to move freely even when the system is armed.

This system and other unique products that Quorum markets are perfect for direct selling and home demonstration. In most states no special license or permit is required as no

installation is required. Increased revenue and profit can be generated in offering these to your normal clientele.

For FREE Information
Circle 326 on Rapid Reply

Alarm Monitoring Suggests How To Increase Profits

What if you could hire an employee without paying him anything ever and what if that employee were able to increase your profits by 52 percent? Suppose the new employee would also be "on-call" around the clock, trouble-shooting your systems and monitoring alarms so that the systems you installed continued to perform flawlessly year after year. And what if that employee was also a technical expert who could answer your questions about particularly tricky installations?

Well, the fact is that if you could find such an employee, you'd have found Alarm Monitoring Services Inc. They have improved their dealers' profits through strict cost-control measures. At the same time they've implemented a network of cross-checks which, when coupled with state-of-the-art equipment, means virtually error-free client monitoring. Finally, they support dealers with extensive, free, technical services.

Dealers come to Alarm Monitoring for the money and they stay for the service.

For FREE Information
Circle 327 on Rapid Reply

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ASP Covers the World of Auto Locks

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Continued from page 50

Make Money With Patio Doors

Be a part of the new trend in selling and servicing products for Sliding Patio Doors. Fifty-eight million sliding patio doors are currently in use in the United States. As a security professional, you can offer your customers safety, security, and conservation. Some new avenues to increase your sales and establish new customers are to contact pool and spa dealers in your area. Visit your local building department for a list of pool permits, and local child safety organizations. This is another great income opportunity for the security professional.

Slideline Inc. has introduced two innovative new patio door products, the Slidematic Closer and the Latchmatic Lock. Both products meet pool safety legislation and are one of the most effective and affordable ways of complying with pool safety requirements. With over 13 million pools, spas and hot tubs currently in use, and over 58 million sliding patio doors, there has proven to be a real need for an effective self-closing and self-latching system for the sliding patio door.

**For FREE Information
Circle 328 on Rapid Reply**

"Marking" Time With Young Bros.

As a security professional, you can offer your customers this money making option. When making keys for a customer, offer to stamp identifying marks on their keys. Many people carry keys for their home, office, car, camper, etc. and being able to identify the similar looking keys with a stamped letter or symbol is a wonderful option, that can increase your profits.

Young Bros. Stamp Works manufactures steel stamps, brass stencils, and steel type. All of the stamps are made with .95 percent carbon tool steel. They use a special heat treatment so they won't shatter under stress. Each stamp is manufactured to their high standards right here in the U.S.A.

You can put sales power to work in limited space. Young Bros. sells most of its stamps in sets. And the wooden box they come in is every bit a Young Bros. tradition as the quality and craftsmanship that goes into the steel stamps themselves. The company has an in-house woodworking department where all of the wooden boxes, like the stamps, are hand-crafted to Young Bros. specifications. This box does several things. It keeps each stamp stored securely and it acts as a composition tray for the user. §

**For FREE Information
Circle 329 on Rapid Reply**

Bits & Pieces

Informative Tidbits For The Security Industry



by Tom Seroogy

Kwikset is changing the placement of the bottom shoulders on their standard keyblank to match the shoulder specifications of their Titan line hardware.

When first introduced, the new six pin lock and key of the Grade 2 Titan hardware were designed to be keyed into existing Kwikset hardware systems. This allows easy upgrading of the system without the need to purchase all new hardware.

While the older Kwikset hardware is easily keyed to the Titan keyblank, the Titan equipment could not be keyed to the standard Kwikset blank. This is due to an approximate .160" cutback of the bottom shoulder on the Titan keyblanks, needed by the Titan hardware. (See illustration 1.)

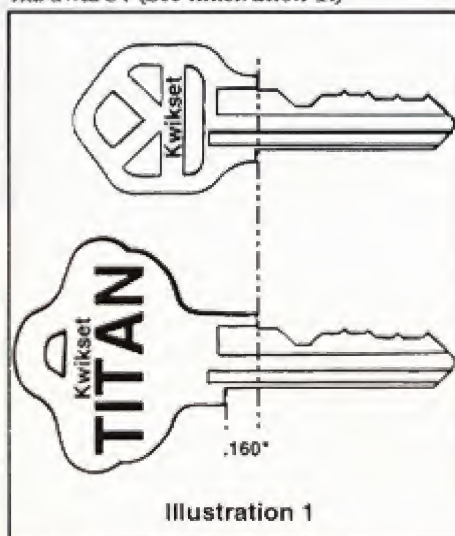


Illustration 1

To make the upgrading process much simpler, the Kwikset keyblanks are now being released with the same bottom shoulder difference. Because of the current bow location cutting back the bottom shoulder on current Kwikset keyblanks is not recommended.

The Dur-A-Ring cylinder ring kit from ALK Supply Corp. is now available. The rings come in various thicknesses, allowing for snug fits between a mortise cylinder and a door, as well as other applications that require cylinder spacing. The kit includes aluminum and duronodic finished rings made of a space-age material, giving them properties superior to the standard metal and rubber rings.

With the color impregnated into the ring, scratches are not visible. And unlike the metal rings will not deform. Also, unlike rubber spacers, they will not break down or break due to cold, heat or UV light. Prices are great.

The kit includes rings with thicknesses of 3/32", 5/32", 7/32" and 9/32" in both aluminum and duro finishes. Refills are also available.

For a Dur-A-Ring kit dealer nearest you, contact ALK Supply Corp. at (708) 894-0041.

Silca has released a new supplement to the North American Key Blank Catalog #404 that was released last year. The supplement includes new key machine accessories for Silca machines, over 100 new keyblanks, and a Silca/Ilco/Taylor cross reference.

The new #404 supplement can be found at Silca distributors or by calling Silca at (216) 487-5454.

I've been getting quite a few letters from our friends overseas regarding the Mitsubishi code series 30010 - 32009. They have been stating that the series we ran in the March 1993 issue does not contain all the bittings for that series. They have also included copies of this code series with the missing bittings.

Well, after looking into this matter, I have found that they are right, but there is a reason for the missing bittings.

According to inside sources, these missing bittings are part of the original list of key codes provided by the manufacturer for Mitsubishi.

Somewhere through the process, however, Mitsubishi decided not to use all of the codes and bittings from the original list, and amended the code series to omit the unused codes.

Locks installed into Mitsubishi vehicles will include only those that they have released and which we have printed.

We don't know the future of this code series and its application. However, if you find a Mitsubishi (or any other vehicle) that includes this series code and whose bitting is not listed, call me at *The National Locksmith* and I'll get the correct bitting for you. The number is (708) 837-2044.

And "thank you" to all that pointed out the codes series difference. Keep up the good work!

Corbin/Russwin is offering a full-line maintenance review seminar for their Exit Devices, Locksets and Door Closers.

The seminars, aimed at locksmiths, are sponsored by participating Corbin/Russwin distributors throughout the U.S.

The seminar includes viewing of the major installation and maintenance steps for the Corbin/Russwin equipment. It also includes hands on with the keyed leverset and rehanging a mortise lock.

Seminars after August include the new Corbin/Russwin catalog and Parts Manual.

This seems like an excellent opportunity for all locksmiths to learn more about the equipment we work on each day. For this reason, I suggest calling local Corbin/Russwin distributors and encouraging them to sponsor this seminar. §

The Lighter Side

Tricks Of The Trade



by Sara Probasco

"Well, so much for 'tricks of the trade,'" Don grumbled as he stomped to the work bench.

"What happened?" I asked.

He was still grumbling. "A simple job, right? Nothing to it. Just stop by on my way back to the shop, pick open the cylinder, repin it, and be out of there in twenty minutes. A piece of cake. Wrong! That's what I get for trying to sandwich something extra in on a busy day. And it was a 'freebie,' at that."

"What happened?" I asked again. I should have known better and kept quiet.

"If you must know, I was in a hurry, and I picked the cylinder the wrong way."

I waited for a moment, but he said nothing more. I waded in again. "So, did you use your plug spinner?"

"I couldn't find it in the service van." Don was rummaging around in a drawer, obviously looking for something small.

"So, you had to start over, picking in the other direction, I assume?"

"I should have, that's for sure. Instead, I decided to try a 'trick of the trade' I came across recently, and use a rubber band."

"I don't understand."

"You wrap a rubber band around the tension wrench," he said, ceasing his search to demonstrate with his hands, "pull it taught, and it's supposed to act like a plug spinner."

"Amazing!" I replied.

"The problem is, it didn't work. The particular lock I was working on didn't have enough tolerance." Moving to another drawer, he resumed his search.

"Then you had to repick it, after all?"

"I would have, only there's one potential problem they neglected to mention."

"What's that?"

"The rubber band yanked the tension wrench out of the cylinder. It flew out in the grass, somewhere, half-way across the yard. I never did find it. I didn't have a spare with me, so I had to come back here for another one. So far, that little twenty minute, give-away, side job has turned into twice the time plus a round trip to the shop, and I'm not in, yet. Aha! There you are," he said, straightening. A smile lit his face, as he displayed a tension wrench. "I'll be right back," he said, and he dashed back to the job.

Later that day, he was called to a church camp to open the preacher's vehicle. The preacher is a mild-mannered man who has a tendency to stutter a bit, when he becomes excited. As Don began wedging the door, the preacher and his wife stood by, watching. The woman edged closer.

"You don't mind if I look to see what you're doing, do you?" she inquired.

"Not at all," Don replied. Then he added, mischievously, "But I'll have to charge 50% more, if you do." (A little trick of the trade he sometimes resorts to, to keep onlookers from getting in the way.)

The preacher snatched his wife back, saying, "N-n-now Martha, y-y-you just g-g-get away from there right n-n-now and let the m-m-man do his w-w-work!"

The day was getting better.

"Boy, am I glad to have that new Lexus opening tool. It makes getting into them a breeze," Don said that afternoon as he came in from opening a vehicle. "Boy, I'll never forget the first time I tried to open one of those."

"Was that the one that, when you got it unlocked, the alarm went off and the door relocked before you could get it open?"

"Right. I thought I'd never figure a way to get into it." Don began to chuckle.

"What's funny?" I asked.

"The lady was telling me something that happened to her recently. She, her mother, and her sister had driven to Austin for a meeting. While they were

there, she stopped at a little shop to pick up some photographs, leaving the other two ladies in her Lexus. As she stepped from the car, she automatically pressed her remote, which locked all the doors." He paused to chuckle again.

"I fail to see the humor. Did I miss something?" I asked.

"No, no. I haven't gotten to the good part, yet. You see, it took her a little longer in the store than any of them had thought it would, and the ladies in the car started getting hot. They tried to roll down the windows, but couldn't, because the ignition wasn't turned on, so they decided to open a door for air." By this time, he was choking back his laughter over his mental images of the situation. "When they tried to unlock the door, the alarm would start up and the door would relock before they could open it. After a while, the alarm would stop, and they'd try again. Then the alarm would go off and the doors would relock."

"What did they do?"

Don wiped tears from his eyes. "By the time the lady finally came out of the store, the others were in a state of panic, pulling at the lock release, yanking the door handle, and screaming and banging on the windows while the alarm screeched away. It must have been a riot, to hear her tell it. She said she'd had no idea that could happen. She'd heard the alarm wailing, but it had never occurred to her it was hers—not with her mother and sister there, in the car. I told her, I could sympathize. If it hadn't been for remembering a couple of tricks of the trade from other locksmiths, I might never have gotten into that first one I encountered."

"Sometimes tricks of the trade can really come in handy," I commented.

"That's true. There's just one thing about it."

"What's that?"

"Once in a while, I come across a locksmith who seems to think that because he's learned a few tricks, he knows the trade."

"Yes?"

"Have I got news for him!" §

August 1993 69

Beginner's Corner

Auto Tools



by Eugene Gentry

My locksmith friend, Rick, called and said, "Are you comfortable with car openings?" He was looking for someone to fill in on extra car opening jobs.

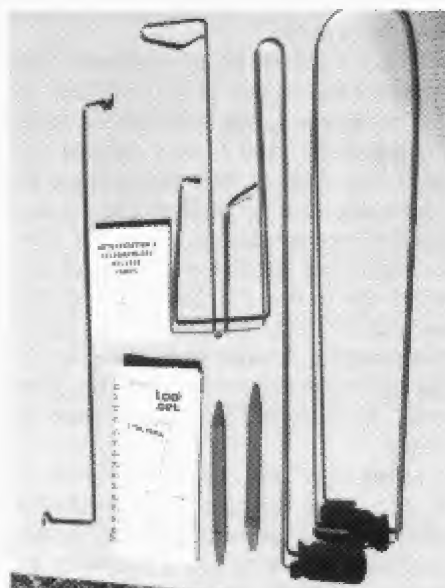
I had to admit that, no I was not comfortable, in fact I had to get better organized in order to handle the calls that I get more efficiently. My auto opening tools are a collection from different companies, with a couple that are homemade. In addition to the tools is a large encyclopedia from one company, a small manual from another company, and a couple of auto opening books.

When some one calls on a lock out, you have to have plenty of information and possible entry methods available to you. For that reason, I had decided to purchase another set of tools, besides the good ones I already owned. You can never have too many tools!

I went ahead and ordered a set of four tools from the Slide Lock Tool Company. The tools came in a canvas carrying case. (See photograph 1.) There were four tools: a stainless steel "Z" tool, a Japanese tool, an under-glass-to-the-inside-of-car tool, and an across-the-car tool. Included was a manual, authorization slips, and two wedges.

The manual is easy to read and understand. The front of the manual lists all domestic and foreign cars, to 1993-1/2, in alphabetical order, along with the page number for instructions on the tool to use and how to open the car. In reviewing the manual, I could see right away how the "Z" tool would be useful in a wide variety of opening situations on a lot of different cars.

Now the test. Do the tools work? The answer is "yes," they work well. But like other auto tools, it takes some



1. Four tools in auto opening set.

practice to become efficient. I tried them out on available vehicles. First was a Dodge with a vertical lift. The window was wedged, and the "Z" tool inserted at an angle. I felt the rod, tried to bind it for a lift, but the tool would not bind. After a few tries I referred to the book and found that I was twisting the rod in the wrong direction for a bind. The next try was perfect and the button lifted up. With a few more practice tries I gained a lot of confidence.

The next opening was on a Nissan with a vertical lift. Using the same procedure, with the "Z" tool, I opened the car in about 5 seconds.

The next try was on a 1987 Honda Civic four door. (See photograph 2.) The window glass separated from the trim so easily that I almost lost the wedge down the door. I called Doug Selby at Slide Lock Tool asking about the smaller wedges included with this set. He said the reason for the small wedges is because of tighter window frames in newer cars. You have to use care not to break the window, so instead of using a larger wedge, he suggested putting a rubber band around the smaller wedge.

The "Z" tool is also used on this Honda. The small end is used to



2. Opening the 1987 Honda Civic.

contact the rocker arm. This opening took several tries to hit the arm located at either side of the key cylinder. With a half dozen more practiced tries, I hit the rocker arm every time.

A 1991 Ford Explorer, four wheel drive was the next test. This has a steel anti-theft window guard under the front door window glass. This is explained in the manual. You can open this car from the front passenger side with the "Z" tool but you have to go in at the extreme edge of the window strip to bypass the guard and reach the vertical lift button. It is easier to go into the rear door, as recommended in the manual, as it does not have the window guard.

The tool called Auto Buster is an under-the-window tool. This tool is thinner than similar tools that I have, and it has a square top rather than the rounded top. When the tool is used, it is tipped so that the pointed edge of the square top comes up inside the window.

Warnings are printed in the manual about this type of tool, suggesting not to use it on any openings not recommended in the manual. Also, it will scratch any tinting done on the inside of the glass. Listed are ways to get the tool out if it becomes stuck.

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Technitips

Continued from page 15



7. A homemade dial puller.

at most any hardware store. You will need one 2" cast iron pipe cap, four 5/16-18 X 1-1/2" socket head cap screws, and one 5/16-18 X 2-1/2" socket head cap screw.

With combination square and center head, find and mark the center of the top of the cap. Next, mark the locations for the four bolts that will secure the puller to the dial. These bolts should be spaced 90 degrees apart, and approximately 1/4" from the bottom rim of the pipe cap. Drill and tap the five holes for the 5/16-18 cap screws. Carefully grind the four 1-1/2" cap screws to a point, and install them into the rim of the cap, as you see in the photo. File, grind, or use a lathe to turn down 5/8" of the threaded end of the longer cap screw to 1/4" diameter. Screw this through the top of the cap.

To pull a dial, find and center punch the center of the dial. Drill a pilot hole, using a 1/8" bit, through the dial to the spindle shaft. Enlarge this hole with a 5/16" bit, just to the top of the spindle shaft, then attach the puller to the dial nose, using the four pointed cap screws. Install the longer cap screw, through the top of the pipe cap, to apply pulling force to the spindle shaft. As the cap screw is tightened, the dial will be pulled off the shaft.

With this new tool, you should realize, that all dials cannot be pulled successfully. Some dials are pinned or threaded onto the spindle shaft, in such a way as to make pulling impossible. Know the lock you are working on, and only use this puller on dials that are pressed onto the spindle shaft. Good Luck.

Jeffrey Kerber
Pennsylvania

Fort Lock Display Board Winner

This Technitip concerns a method that I used to solve a potentially expensive mistake, made by a local "discount lumber and home center" that also cuts keys. The key cutter had cut a key for a 1989 Honda over an HD83 blank. The HD90 blank, which is slightly longer, would have been the



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correct choice in this case. The customer inserted the key into the ignition and turned it to the "on" position, but found the key could not be turned back to the off or "key pull" position. The lumber yard called, in a panic, to have the key removed without damaging the ignition lock. I quoted a price to remove the ignition cylinder, because I thought I would have to disassemble the plug from the cylinder to release the key blade. But, when the customer got to the shop, I inspected the damage and thought I'd try cutting the head of the key off, so it could be depressed far enough to be rotated to the off position and removed.

A die grinder was used to remove enough of the key head to allow the plug to be rotated to the off position and the key was removed. There was no damage to the auto, and I cut the customer a duplicate key over the correct blank. I could not, in good conscience, charge the lumber yard according to the quote, which was to remove and disassemble the ignition. I did, however, charge them fairly for my labor and knowledge.

There's more to making keys than owning a key machine.

Larry Kanzer
Pennsylvania

Locksmith Schools

Continued from page 41

programs.

PTC's Locksmithing program combines technical courses with an industry internship. Included are topics such as lock and key identification, impressioning, picking, master keying, installations, safes, automotive, electronics and access control.

Industry-focused courses include security theory and management, small business management and marketing. General education courses in math, communication, and computers are also required for a degree or diploma.

Financial aid is available through veterans benefits, student loans, state and federal grants and scholarships. Employer paid training and other state and federal retraining money have supported students' education. New students may enter a program at quarterly start dates throughout the year.

Services such as counseling, academic tutoring, placement and on-site childcare are also available to students.

Through customized training services, PTC faculty who are all CML's are available to do on-site training for companies or organizations. These may be college credit based or hour-certificate based.

Pine Technical College's goal is to serve the student locksmith and the industry by providing comprehensive, current and quality locksmithing education. §

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Team Safecracking

Continued from page 43

steel drill bits, and hours and hours of drilling and pounding on this door. We, in fact, cleaned up all of our 1/4" drill bits which included many of the following:

1. StrongArm drill bits
2. Keedex carbide bits
3. Wonder tips
4. Positive and negative rake German carbide bits
5. Magnum carbide drill bits
6. Lockmasters carbide drill bits.
7. Stellite, and other exotic material drills
8. Chipper carbide drill bits.

They all had one thing in common. None of them worked really well against this incredible carbide (RELSOM) that this safe/chest incorporated. Pound and drill, pound and drill, etc.

The map in general of the round safe door material included, in order:

1. Soft steel
2. Case hardened outer layers
3. Soft steel (not much)
4. Case hardened steel
5. A layer of copper (to thwart using a cutting torch)
6. The really hard RELSOM, too much of it!!!
7. The lock mounting place
8. The actual lock (soft metal)

We repaired the opening with two hardened safe repair pins. The lock was not replaced. The customer in fact did not want to use this unit again. We charged a fee under four figures, which after talking to other safemen, was regarded as a gift. In the future, if I ever have to go against one of these units, the price will start at four figures and go up.

How did we charge for this? We set a large hourly rate for both of us, and figured up the cost of 50 carbide drill bits. We then added an aggravation factor and determinant. We gave them the price. They paid it as I was towering over the client. Tom then took out the actual cost of replacing 50 drill bits, and we split the difference. If I was doing this job on my own, I would have lost more time and energy before I got it open. Hooray for the team! Team up, and both will prosper!! §

The ADA...A Sleeper

Continued from page 44

opening pressures, door closers, and sliding door hardware. Things that do fall into our area of expertise.

Although an entity might plead that the alterations are not "readily achievable" and would pose an undue "financial burden" on the business; door hardware such as lever-sets and push/pull handles would hardly qualify as an "undue financial burden" or "not readily achievable" exemption. Even if that entity were to offer "alternative steps...to make goods and services accessible." Such alternatives would be home delivery, curb, sidewalk or door service. Or, relocating "activities" to an accessible location.

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the ADA: If, by chance, you have a customer that does not feel that they have to make the alterations required by the ADA, and they were to be cited for non-compliance after an investigation by the U. S. Justice Dept. (enforcement of the ADA has been given to the Civil Rights Division of the Justice Department), their first fine would be \$50,000.00!

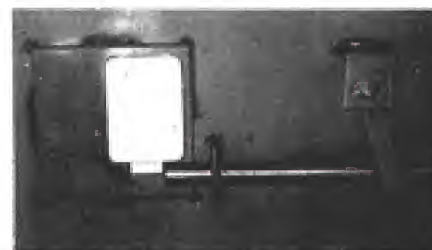
However you look at it, the ADA is going to cost all facets of American business, and state and local governments money. If the public and private sectors bring their facilities into compliance they'll spend to do it. If they don't, and they're cited for non-compliance it's fifty big ones, not counting attorney's fees!

That kind of money, my friends, could really "blow you off the road!" However, what I see ahead for the locksmith that is moxie enough to find out what the requirements of the ADA are, and then inform their customers that they can help them comply with at least the getting "in the front door" aspect of the ADA ... is a shower of shekels courtesy of Uncle Sam!

Just stop to think about it. A federal law is passed that says that disabled citizens *must* be granted equal access to the goods, services, and benefits of American business. If they are denied that equal access, the violators are in for some heavy fines if cited for non-compliance. Then, the U.S. Justice Department, in effect, tells you, a potential provider of the hardware that will help accomplish the "equal access," that they will give you the information you need to work within the ADA framework absolutely free! What more could you ask for by way of opportunity?

If you write: Office on the Americans with Disabilities Act, Civil Rights Division, U. S. Department of Justice, P. O. Box 66118, Washington, DC 20035-6118, and request their information on the ADA, Title II, and Title III, they'll send you the whole package. Including copies of the Federal Register that spells the law out in detail.

So, what are you waiting for? Get the information, find out what you can offer your customers, and use your new found knowledge of the ADA to blow your competition off the road! §



5. A close-up of lock and handle.

right back at her. "Ma'am, I don't want to be back here some day in the future after you and your husband have been hit. I really hate saying 'I told you so.' But if you and he don't buy a burglary safe, a safe designed to keep burglars at bay, then you are courting disaster. Good grief, you have enough in there to buy a



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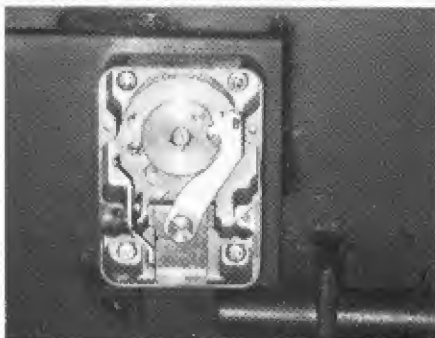
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Continued from previous page

good quality TL-30, or even better a TL-30x6, and not even notice the difference. Please, do us all a favor and at least go shopping. Look, I am not trying to sell you something you don't need. As a matter of fact I don't even sell safes, I just open them.

I gave her the names of three prominent safe dealers and told her to tell them that I said to treat her well. I also assured her that there were no kickbacks involved. Geez, people are paranoid!

I removed the back cover of the vertically down mounted Sargent & Greenleaf R6730. (See photograph 7.) There is no external relocker on this safe, but there is an internal relocker inside the case of the combination lock.



7. The S&G R6730, cover removed.

We continued our chat while I repaired the hole, serviced the lock, and set a new (easy-to-remember) combination. I made her promise me that she and her husband would at least go to a couple of shops and look.

Fort Knox makes a good gun safe. I simply told the customer to use it for its intended purpose. §

Beginner's Corner

Continued from page 70

I didn't have a car to open with the Japanese Tool, so I experimented on the Nissan. It could not come up on the inside of the window. Of course I should have expected this as this tool is not recommended for this car.

The across-the-car tool is not an across the car tool, as the name implies. Instead it is used on the same door where entry is made. (See photograph 4.) It is used on frameless window models that can not be opened through the door cavity, and can also be used to contact power lock buttons. The only car listed in the manual for this tool is the Lexus ES 250 and the ES 300. This tool is bent in a U shape to fit in the carrying case and is bent into a wide V shape to use.

So far the tools are doing what they are supposed to do. The "Z" tool is the most versatile with use on both foreign and domestic cars. The other tools fill in on more difficult openings. The company has a technical assistance phone number. Tools are sold through ads in the trade magazines.

For information call Slide Lock Tool Company, (800) 336-8812. §



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